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THE  
BROOKLYN MEDICAL JOURNAL

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VOLUME V.

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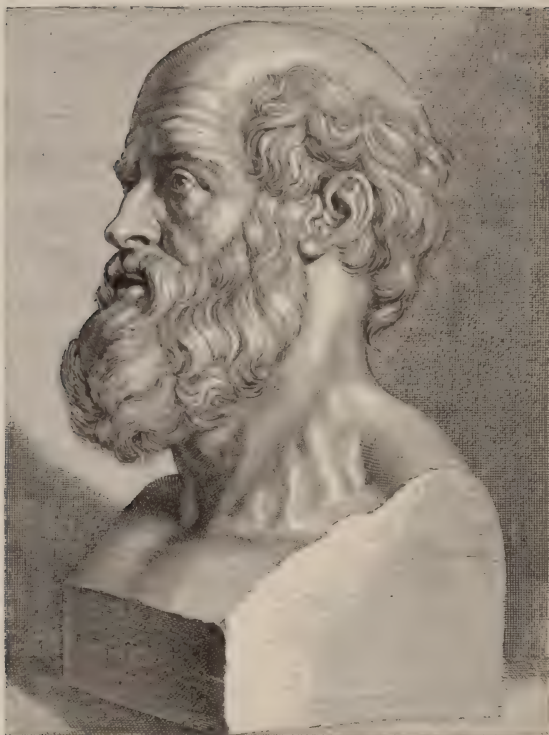
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HIPPOCRATES. HERACLIDE F. CONV.  
Her. marm. ant. 1800. Sculp. J. P. 1800. Grav. J. P. 1800.

### HIPPOCRATES.

“The Father of Physic and the Prince of Physicians,” was born on the little island of Cos, about the year 460 B. C. Hippocrates had the good fortune to live in an age of progress. The earliest historians, the earliest and ablest dramatists, the profoundest philosophers, the wisest legislators, the ablest generals, the greatest architects, painters and sculptors of Greece, were all men of the same epoch. While other arts and sciences were springing into life, and rising to maturity, it is not surprising that some man of genius should appear in the ranks of medicine, to give to its principles form and substance. This man was Hippocrates.

He belonged to a race of doctors; had been instructed and trained from infancy by his father, Heraclides, at the great Asclepion at Cos. He was perfectly familiar with not only all that had been written upon the subject, but also with all the traditions and mysteries of the Asclepiade, whose temples were the medical schools and hospitals of that day.

He was the first man we know of who laid down precepts concerning physic.

He was a close and conscientious observer, his language plain and accurate but entirely void of literary merit. He tells the naked truth in the plainest possible language.

Although he was of the order of priests, born and bred in the temple of the god from whom he was believed to be descended, and himself revered as a divinity, yet, strange to say! his writings are characterized by appeals to the reason, and never either to the passions or to respect for blind authority. Indeed the most striking feature of this great man was common sense. He had the power to see through the superstition of his age, and the more uncommon sense to let it alone, testifying by his speech and life to the truth he believed in and leaving to others the exposure of errors.



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EDITORIAL COMMITTEE:

JOSEPH H. RAYMOND, M. D.,

FRED. D. BAILEY, M. D.

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ORIGINAL ARTICLES.

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A PAPER INTRODUCTORY TO A DISCUSSION ON THE  
TREATMENT OF TUBERCULAR DISEASE, MEDICAL  
AND SURGICAL.

BY NELSON L. NORTH, M. D.,

Consulting Surgeon to the Methodist Episcopal Hospital.

Read before the Kings County Medical Association, October 14, 1890.

(Concluded from page 799, Dec., '90.)

“There is nothing new under the sun” is an adage which, if not positively true in every detail, is nevertheless the expression of a great thought catching the line of another and similar one, that “his repeats itself.” Medical thought and discussion run in cycles—I had almost said in *circles*—which, after a round of apparently unique modes of expression and experimentation, returns, in some way, to the thought and expression of the fathers. A new school—as of homeopathy or instantan—arises and obtains popularity through vilification of regular medicine, particularly in its use of calomel, etc., and comes back treating almost every conceivable kind of disease with some form of “mercurials.” Need it be thought strange, then, if, after the diligent search for a germicide which shall best uncover and destroy the bacillus tuberculosis, it shall be found in the old vilified friend of the ages back, hydrargyrum chloridum?

You will not understand me, of course, to make the assertion that we have the long-looked-for bacillicide in the chlorides of mercury, and yet the treatment of tuberculosis by mercurials and remedies of a like nature is certainly worthy of more serious consideration. It has been fully demonstrated that an agent may be aseptic and antiseptic, that it may retard the growth or even completely destroy the life of a germ or its spore when permitted an immediate contact, as in a culture-medium, and yet have no perceptible effect when introduced into the animal organism suffering from disease caused apparently by this same microscopic germ, even though the amount of the germicide be introduced into the organism in the full proportion needed for a complete destruction in a culture-medium. Something further seems to be required; and it is fair to suppose that the germicide fails because it fails of immediate contact with the germ. A softening, uncovering process seems to be needful. What better prospect of obtaining this than through the specific action of the preparations of mercury, particularly the chlorides of mercury, as also the preparations of gold, ammonium, and other agents which produce ptyalism?

If we go back to our old books, or if some of us go back to our old experience of even thirty-five and forty years ago, when so much reliance was placed upon the use of mercury to salivation, we must come to one of two conclusions, viz., that either there is some great curative power in the use of mercury in that way, particularly in many inflammatory diseases, or the practitioners of medicine in the early part of the century, and before, were unwise and untrustworthy men! The *truth* is, probably, that no age of the world's history has produced men of greater learning or of more profound wisdom or of keener scientific research than the members of the medical profession just referred to. In "Elliotson's Practice," published in London and republished in Philadelphia about 1840, we read, under the head of treatment for continued fever: "In many of these fevers it is of the greatest use to give mercury; especially if there be a degree of inflammation, and great foulness of the tongue. If given in small, but repeated doses, it will answer the purposes of clearing out the intestines. It not only purges the patient, but, by degrees, causes the tongue and the interior of the mouth to become moist; and when that is effected, the patient is almost sure to be better."<sup>1</sup>

Prof. Watson (also of London), the renowned and scholarly lecturer, of about the same period and later, says, in speaking of the treatment of pneumonia in the second stage: "Mercury is worthy of confidence. . . . The object of giving it is to make the gums tender; and it is

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<sup>1</sup> Elliotson's Practice, p. 323.

expedient to do this as speedily as may be. Small doses of calomel, repeated at short intervals—a grain every hour or two—offers the most certain way of accomplishing our object. . . . If the internal use of mercury be any how contra-indicated, or if it appear slow in producing its specific effect, the linimentum hydrargyri may be rubbed in, or the strong mercurial ointment. Many persons, I am persuaded, are saved by treatment of this kind, pushed to slight ptyalism.”<sup>2</sup>

Dr. Geo. B. Wood, of Philadelphia, so long Professor of the Theory and Practice of Medicine in the University of Pennsylvania, in speaking of the treatment of rheumatism, after referring to the use of venesection and the administration of tartar emetic, Dover’s powder, guaiac, and some other medicines, says: “Should these remedies have failed to make the desired impression at the end of one or at the most two weeks, or should the disease assume in any respect a threatening character, it will be advisable to employ calomel, with a view to its alterative influence. . . . I have no doubt whatever of the frequently controlling influence of mercury over acute rheumatism at this stage. . . . There is generally a speedy abatement of the symptoms on the occurrence of soreness of the gums.”<sup>3</sup>

But I need not quote further; all who are familiar with the literature of forty and fifty years ago know that to produce more or less complete salivation was the end sought for in the treatment of very many diseases. Many a time, when I have been permitted, as a student of medicine, to visit patients with my honored preceptor,<sup>4</sup> have I seen him watch eagerly for the first symptoms of ptyalism, feeling the tongue and gums and carefully smelling the breath, and on the first approach of the specific mercurial effect confidently predict that the patient would be better at the next visit; and many a time have I seen the prediction come true. Unfortunately the evil effects of the mercurial treatment of disease became so apparent to the physician and the public, that it gradually fell into disuse, and other things were substituted therefor. The treatment of disease is, perhaps, conducted *now* more *scientifically* than it was *then*; whether more successfully or not, I am not here to say: but that there is great power for good in the use of the mercurials cannot be successfully controverted. And if used with the light of the present knowledge of the cause of disease, and of their softening, uncovering, and germicidal power, I cannot doubt that a return to the preparations of mercury, in a modified form, and with a more complete understanding of the manner in which they accomplish the *good* of which they are capable, with, at the same time, a better knowledge of the way to

<sup>2</sup> Watson’s Practice, p. 635.

<sup>3</sup> Wood’s Practice, vol. ii., p. 484.

<sup>4</sup> Dr. Wm. B. Gould, of Lockport, N. Y.

counteract their evil effects, will be hailed as a *forward* movement in the treatment of disease; and I make bold to predict that, when medical men shall more fully understand the nature, power, and manner of development of disease from disease-germs, and the power and *modus operandi* of mercurials and other *like* agents upon these germs, then shall the diseases so much dreaded heretofore, because so unmanageable, including pulmonary phthisis, be counted not only as *preventable*, but as *curable* maladies.

In discussing the treatment of tuberculosis as at present indicated, we may well consider it under three heads, to wit: *Preventive, curative, and palliative*; and, under the head of prevention, hygiene, food, and medicine stand important in the relation named.

A proper and imperative regard to the laws of health in the training and development of children with a consumptive tendency is of paramount importance. The best climate available, a proper diet regimen, dress, exercise, etc., should be insisted upon, that the development of the individual, from childhood up, may be most complete and perfect. An encouragement of the vital forces to the fullest extent, so as to overcome the evil, inherited tendencies, so as to prevent a degeneracy of system that will develop or produce in the system a "soil" adapted to the growth of germ-life, is most important. Next to this it is of the greatest consequence that the food taken be simple, properly cooked or prepared, easily digested, of a nourishing character, and free from disease-germs, and especially free from the bacillus tuberculosis.

With correct hygiene and correct and properly prepared food, little need be said of medicine as a preventive of tuberculosis, other than as to the chemicals, disinfectants, etc., necessary to cleanse infected dwellings, beds and bedding, sputa, spit-cups, etc., and the simple remedies needed to bring quickly under control the accidental attacks of rhinitis, pharyngitis, laryngitis, and bronchitis, to which those inclined to phthisis are so often subject. Then, in addition, the surgical treatment of chronic joint-diseases, cold abscesses, many glandular enlargements, some cases of chronic cystitis, chronic diseases of the testicles and of the ovaries, and all other diseases having a tubercular origin, have a direct bearing upon the subject of preventing general tuberculosis, and especially of preventing tubercular consumption.

The matter of prevention by inoculation is under consideration and experimentation by Drs. Groucher, Koch, and others; but while encouragement has been given, no positive results have as yet been promulgated.

Dr. John G. Johnson, of this city, in his admirable paper read before the Medical Society of the County of Kings some months ago, on "Disease-Germs and Disinfectants," said: "Consumption carries off

one-third of all people who die between fifteen and twenty-five years of age. Formerly it was taught that this was a hereditary disease; its origin was unknown. Now all intelligent persons are aware that it is produced by a disease-germ, the bacillus tuberculosis; that this disease is common to the cow and ox, that are used for our food; that cooking meat rare, with blood gravy, does not destroy the germs, but that we take them alive into our system. Foreign governments are moving for the protection of their people. In Berlin every animal is slaughtered at the public abattoir; . . . the particulars are entered in a ledger, and specimens are sent to the microscopist, . . . and the report, one tubercular, eight trichinæ, eleven cancer, or all healthy, as the case may be, . . . and the order to destroy the animal, as unfit for food, or to certify it as healthy, is issued." "Careful inspection of the cows kept for milk, in Dutchess and Westchester Counties, shows that you can hardly find a cow over nine years of age that is not consumptive; and on those farms, where distillery swill and brewers' grains are fed to the milch-cows, their life is only a year to a year and a half in one of those stables before they are so far gone with consumption that they are slaughtered for the New York market, and those parts of the animal that they think will not pass the inspection are sold for the manufacture of bologna-sausages. Where tubercular deposits are found in the cow's udders, the bacilli are always found in the milk. Careful examination of children who have died of marasmus, in many cases, shows the bacilli tuberculosis in the absorbents leading from the intestine and in the mesenteric glands, and in no other part of the body, showing conclusively that the milk furnished these children after weaning was the cause of their death."<sup>5</sup>

Shall we not advise the people, then, under these circumstances, to have their meat *well* cooked and their milk sterilized?

(I had intended in this connection to have made somewhat extensive quotations from authors, but time and space will permit only brief extracts.)

Dr. Karl Hirschberger, of the Munich Pathological Institute, has made a series of experiments upon cows in relation to the infection from milk, and, on the strength of his experiments, he states that the danger of infection from milk of tuberculous cows does not only exist, but is very great, being found in fifty-five per cent. of all cases examined.<sup>6</sup>

Abbott, in his experiments on milk as a culture-medium for the tubercle bacillus, says: "The conclusion, then, from these experiments, in connection with results from other observers, is that the milk

<sup>5</sup> Brooklyn Medical Journal, April, 1890, p. 208.

<sup>6</sup> London Lancet, August. 1890.

of these cattle not only may contain the tubercle bacillus, but that the organism retains its vitality, and may even increase and multiply in numbers, under favorable conditions.

“With few exceptions, in this country, the use of uncooked milk is the rule, and there can hardly be any doubt that a certain amount of infection takes place in this way. . . . The sterilization of milk for domestic use is a simple matter, and should be insisted upon.”<sup>7</sup>

There can be very little question of the propriety of instituting measures, public and private, for the prevention of the spread of tuberculosis through the discharges from tuberculous joints, abscesses, and, more particularly, through the sputum of the sick of pulmonary phthisis. In this way hospitals, dwelling-houses, street-cars, and other public places and conveyances become breeders of disease and help to enlarge the death-roll from consumption. Communities, as at present educated, will hardly consent to have their loved ones, who are falling into “decline,” quarantined or even denied free access to public conveyances, theatres, concerts, churches, etc.; and yet these and even more rigid measures must be adopted if the fatal malady, consumption, is to be fully prevented, stamped out.

There is a growing sentiment of the possibility of leprosy being itself of tuberculous origin, and yet nobody, except the physician, thinks otherwise than that leprosy ought to be carefully put under quarantine; and it is now, as of olden time, considered proper that a leper, on the approach of well people, should cry out: “Unclean! unclean!” And yet it is quite possible, that, if the discharges and sputa of the tuberculous sick can be entirely put under control and destroyed, the object—prevention of contamination—can be attained.

In the paper read before the American Medical Association, by Dr. Wilson, of Philadelphia, to which we have before referred, he says: “Reduced to its simplest form, the problem of prophylaxis against the spread of the tuberculous diseases among human beings consists in the proper care of the fresh expectoration of consumptives. Not dangerous when moist, it becomes, when dried, a fruitful—in fact, the chief—means of the spread of the disease, from the lesions of which alone it is derived.

“The sputum of those suffering from pulmonary phthisis should, under all circumstances, be collected in suitable vessels, and kept in a moist condition, until it is either destroyed by fire or discharged into sewers under such conditions as will insure its conveyance to places where it is not likely to become a source of danger. Spitting upon the floor, or in the street, or into handkerchiefs, or towels should in all

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<sup>7</sup> Johns Hopkins Bulletin, May, 1890.

instances be avoided. Patients should be required not only to use in their rooms and in the house a suitable cuspidor, but to carry with them pocket spit-cups in which to collect the discharge."<sup>8</sup>

A German journal,<sup>9</sup> giving the proceedings of a late meeting of the German Public Sanitation Association, quotes Prof. Heller as saying that he believes "tuberculosis is to be regarded as the most important of all diseases, in that it furnishes the largest mortality of all causes of death. . . . He estimates the number of tubercle bacilli in the sputum of a tubercular subject at 1,000,000 per cubic centimetre; in a single expectoration, on an average, 3,000,000 bacilli are discharged. The control, he says, of tuberculosis should be urged most vigorously by state and community; such warfare promises a very important diminution, if not complete extermination, of the disease. . . . As measures to be taken against the spread of tuberculosis, mention may be made of the disinfection of the sputum in schools; . . . the erection of disinfecting stations throughout the community, with the instruction of people regarding the technique of disinfection; repeated disinfection of dwellings and of the utensils of tubercular invalids; the enforced disinfection of dwellings and effects of those who have died from tuberculosis; attention to the health of wet-nurses, midwives, and attendants upon the sick; the supervision of those who are engaged in the preparation and sale of food-stuffs, with the exclusion from such employments of coughers; the careful hygiene of hospitals, prisons, orphan asylums, and all similar institutions; the instruction of the populace; the strict enforcement of meat inspection; attention to breeding of tubercular animals; the inspection by veterinaries of the stabling where tubercular animals are found; the destruction of all animals found to be tubercular, with at least partial compensation to owners; and the inspection of milk-depots." The too frequent custom of ladies saluting one another with a kiss should be discouraged, as unsanitary.

Regarding the subject of prevention of general tuberculosis (including phthisis pulmonalis) through means of surgery, both space and time admonish me that I must be brief, more particularly as I had the honor to present my views thereon somewhat in detail before the Fifth District Branch of the State Association, at a meeting in Brooklyn some two years ago.<sup>10</sup> I can only suggest that all cold abscesses should be early opened and cleansed, tuberculous joints should be incised, excised, or amputated, care being taken to remove all tubercular matter if possible, and thorough asepsis, antiseption, and disinfection practised. Tuberculous glands should be early removed, etc., when practicable.

<sup>8</sup> Journal of the American Medical Association, March 22, 1890, p. 404.

<sup>9</sup> Wiener med. Wochenschrift.

<sup>10</sup> See Gaillard's Medical Journal, August, 1888.

Partial or complete laryngectomy may be mentioned as both preventive and curative treatment of tuberculosis; so also the amputation of the lung apex and the incision of and cleansing of lung-abscesses.

Surgeons differ so materially, however, upon the subject of treatment of diseased joints, and especially in regard to these operations as means of prevention of general tuberculosis, that it is needful to be cautious in recommending this kind of preventive practice, as it is thought by some that the practice precipitates what it is sought to prevent. Dr. Marsh, Professor of Surgery at the Royal College, England, in an extensive paper on "The Principle and Results of Excision in Tubercular Disease of Joints,"<sup>11</sup> says, after quoting statistics from Craft and Wright: "From these figures it appears that, although the possibility of general infection from a tubercular joint is a distinct element of danger, the risk is so small that it cannot be regarded as affording any substantial support to the practice of early excision."

The line between preventive and curative measures is indistinct, especially as regards surgical methods. The removal of tubercular glands, if resorted to early, may be deemed both preventive and curative; so also the surgical treatment of morbus coxarius, if successful, is both curative as relates to the hip-joint, and preventive of general tuberculosis.

While tubercular phthisis, or pulmonary consumption, usually passes on to a fatal termination, it is yet unfair to speak of it as an incurable disease, as was so generally the habit a few years ago, and still is in some quarters. Very few physicians, who have been even a brief time in practice, but have met with cases of phthisis which have recovered; some of these cases of recovery have been mild attacks, and such as disbelievers in the possibility of cure may easily bring themselves to consider examples of false diagnosis. There are cases, however, which some of us can call to mind, in which the symptoms were so pronounced as to exclude the possibility of a wrong diagnosis. It is proper, then, to speak of even "phthisis pulmonalis" as a curable disease, and refer to its treatment under the head of curative measures.

The hospital for indigent consumptives, in this city, called the "Home for Consumptives," in the last annual report of their physicians, signed by E. Reynolds, M.D., as chairman, I find it stated that the total number of patients treated in the department indicated was 120: of these 33 died, 12 were discharged *cured*, 11 improved, 8 not suitable for the Home, 12 with *little* or no improvement of the lungs, 44 remaining in the Home.

<sup>11</sup> Braithwaite's Retrospect, January, 1899, p. 97. From the Lancet.



This remarkably good showing led me to visit the Home, of which I knew something before. Through the kindness of Dr. W. N. Belcher I was made more conversant with the plan and workings of the hospital and the nature of the treatment of the inmates. Their vapor-inhalations are produced by the compressed-air system, and have been arranged under the direction of Dr. Reynolds, who has kindly written me an account of their treatment and general management, from which I gladly quote—the more readily because of their pronounced good results, even among a class of patients taken from among the very poor, of whom many are in the last stage of the disease when admitted to the institution, and because Dr. Reynolds' management gives the best idea of the most prevalent plan of treatment *just now* in this vicinity of New York and Brooklyn. Dr. Reynolds says:

“In our treatment we depend largely upon the inhalation of vapor, medicated with beechwood, creasote, bichloride or iodide of mercury, and sprays of various substances for the bronchial irritations. Every morning, those able to do so, assemble in the room set apart for the purpose, and use the inhalers for ten minutes; this is usually repeated in the afternoon. In addition, the room is filled with a 1 to 1000 bichloride vapor. This is done for the protection of nurses and others. To allay cough, we use freely a pill containing two drops of beechwood, creasote, anodynes, and expectorants. We endeavor to get as much creasote in the system as possible, and in the form of our pill it is absorbed so gradually that a large quantity can be taken in the twenty-four hours; cod-liver oil, a liberal diet, etc. Stimulants are used sparingly.

“The inmates are urged to remain in the open air; and as soon as the grounds are in a proper state, we shall insist upon this.

“This has been our general line of treatment. Inhalation of peroxide of hydrogen appeared to induce hæmorrhages. Orexin, to increase the appetite, was given a thorough trial, without the slightest benefit. Bergeon's treatment proved a total failure, and the excitement and exertion attending its use was harmful.

“Hand-spittoons, containing bichloride solution, are carried about by the patients. We aim to thoroughly disinfect both the inside and outside of our charges. So far the attendants have remained as healthy and in as good condition as those in other institutions, although their work is much more wearing.

“The majority of those admitted [to the Home for treatment] are in the last stages of disease; some die within twenty-four hours, and in but few cases can a hopeful prognosis be given. But with this unfavorable material, I think we have every reason to believe that the inhalation-treatment has given the most satisfactory results yet attained. Cough

and expectoration lessened, sputum not so offensive, hæmorrhages and night-sweats not so frequent as formerly, etc.”<sup>12</sup>

The treatment by intra-pulmonary injections, by the pneumatic cabinet, by the hot-air method, also by pneumotomy, and the different systems of draining have their advocates, but seem to be gradually falling into disuse, but will no doubt be to some extent revived, particularly the surgical measures, which do not seem to have been fairly put to a full test.

Creasote, both internally and by inhalation, seems to be the favorite medicine just at present, and no doubt has been beneficial. “The experiments of M. Guthmann demonstrate that the development of the bacillus tuberculosis is hindered when creasote is present in the blood in the proportion of 1 to 4000. This condition may be maintained by exhibiting fifteen grains of creasote a day.”<sup>13</sup> It is said that guaicol may be given in Malaga or Tokay wine with less irritative effect than creasote, and with the same result.

A few years ago I was in the habit of giving iodoform internally for phthisis, seemingly with good effect, in doses of one grain three times a day. It seems pretty well established that iodoform, directly applied to tubercular abscesses and ulcers, proves beneficial and somewhat destructive to the tubercular germ. My friend, Dr. Pilcher, of the New York Post-Graduate School, and of the Methodist Hospital, as well, in the columns of the *Annals of Surgery* (of which he is editor), says: “The beneficial effects of iodoform, when applied directly to tubercular tissues, has been widely accepted.” And then, in an article pretty well covering the subject, giving English, French, and German quotations, and after giving clinical examples of tubercular ulcers, which had come under his own observation, that had received treatments of a different nature, without iodoform and with, he says: “The difference in the course of these two ulcers was so marked that it could not escape the observation of the most casual observer. The question as to the cause of this difference is singularly free from difficulty. The hygienic and constitutional and local conditions of these ulcers were the same for each, and unusually good for both. Both were treated at the same time by the same surgeon. The difference in their course is unmistakably due to the difference in the treatment pursued. In this case certainly a most favorable influence upon the tubercular process was exerted by the iodoform applications.”<sup>14</sup>

In the recent issue of “Braithwaite's Retrospect”<sup>15</sup> is an excerpt

<sup>12</sup> Extract from letter from E. Reynolds, M.D., to author.

<sup>13</sup> Deutsche med. Wochenschrift.

<sup>14</sup> Prof. L. S. Pilcher, in *Annals of Surgery*, September, 1880, p. 161.

<sup>15</sup> Braithwaite's Retrospect, July, 1890, p. 81.

from a paper published in the *Glasgow Medical Journal*, by J. Walker Downie, M.B., Surgeon Western Infirmary, Glasgow, in which he urges the use of intra-laryngeal injections for laryngeal phthisis. After using different articles of medical material, he finally gives preference to menthol and creasote, and gives very encouraging accounts of the result. He says the patient, soon after the injection, feels a sensation of warmth and comfort, is relieved of the irritation and oppression and tendency to cough, and, when administered at night, usually secures rest for the night without the usual anodynes.

Dr. Jno. A. Robinson, of Chicago, Ill., gives, in the August number of the *Dietetic Gazette*, a valuable plan for the management of the nourishment of the consumptive, and says truly that "the manager of the cuisine holds the key to success in benefiting consumptives."

Dr. J. Solis Cohen, Professor of Practice of Medicine, of Philadelphia, in a paper read before the American Medical Association, objects to the germ-theory of consumption, or rather to the general conclusions drawn therefrom, and says: "That condition which is commonly alluded to by writers, holding the current view, as a 'predisposition,' 'want of immunity,' 'lack of resisting power,' 'presence of culture-medium,' etc., is in this paper regarded as the disease itself—the consumption, the phthisis—against which the efforts of the physician are to be directed; and the bacillary features—the tuberculosis, if you will—are regarded as the epiphenomena. . . . The disease is one of malnutrition, of wasting. The remedy is nutrition, feeding."<sup>16</sup> Then he follows with a great many good things and a great many very important things, which somehow seem to have been of late overlooked. He says, in brief: "Diet is of two kinds—alimentary and respiratory. Air is food equally with meat and drink. Proper regulation of both is absolutely necessary. . . . The frequency of taking food should not be left to the whims or discretion of the patient. Everything should be accurately prescribed, not only as to quality and quantity of food, but also as to the exact times of eating. . . . We may outline an ordinary routine, susceptible of modification with the season and according to the individual taste or circumstances.

"The patient should drink a pint of hot water on awakening in the morning, and a little later take a glass of milk-punch with a tablespoonful of peptonoids. An hour or so after this follows breakfast, consisting of rare broiled beefsteak, mutton-chops, broiled fish, or eggs boiled or poached, with coffee or chocolate if desired, milk, sliced tomatoes or other seasonable vegetable, a moderate amount of bread, with a great

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<sup>16</sup> Food in the Treatment of Consumption, etc. Journal American Medical Association, February, 1890, p. 186.

deal of butter. If much desired, a dish of gruel or porridge, preferably cracked wheat, may be allowed.

"Two or three hours later, kumyss, or soup, or broth strengthened with beef peptonoids, milk, butter and bread, celery, and a salad of greens follow. At one or two o'clock a substantial dinner is eaten, of which bouillon, with or without beef peptonoids, is the first item, and rare roast-beef the principal dish, the meal consisting, in addition, of the allowable vegetables, especially the greens; and, when possible, a glass of Burgundy or other generous red wine, or good wine of coca, or even a glass or two of beer, is drunk during the meal. Fruits are the only possible dessert. Dinner should, in many cases, be preceded by the drinking of hot water (half a pint to a pint), half an hour to an hour before eating; hot lemonade is sometimes more agreeable. At three or four o'clock comes kumyss, or cream, or milk-punch with peptonoids, or malt extract; at six or seven, supper of a character similar to the breakfast; at nine, or at latest ten o'clock, bed-time, the patient drinks cream with cocoa, coca wine, or milk, and liquid peptonoids, with or without cocoa; while coca wine, or milk, or cream, with or without alcohol and peptonoids, is placed within easy reach for use on waking during the night; cold water may be taken at suitable intervals between meals, never with meals."

I have quoted this *menu* of Dr. Solis Cohen in full, that I may do him justice, and that we may get his idea of treatment by "over-feeding," "cramming." It may be a question whether some of us would like to take the responsibility of advising alcoholic stimulants to such an extent; still, with the amount of food given, the alcoholics could hardly do harm in their usual way, and who knows but they might sterilize the animal liquids, and so cause them to become bad culture-media, and thus make Dr. Solis Cohen a bacillus-destroyer unwittingly.

Prof. Cohen's "second digestion," or the *respiratory treatment*, is, we believe, of the utmost importance, and with his apparatus to carry out the plan of lung-calisthenics and lung-ventilation, with which I suppose you are all familiar, one cannot doubt great good is to be done, and it is more than likely that, if we learn again these old lessons of consumptive-treatment which this Philadelphia teacher inculcates, they may be found useful and of great value to our patients, even if the good news, which we now hope very shortly to hear from the Koch-Berlin laboratory, shall come to us in a proclamation of an unflinching destructive agent for the Koch bacillus tuberculosis.

Rumor seems to point to the cyanide of gold as the coming "medicine," and, as another has recently said: "If Dr. Robert Koch shall succeed in preventing and combating and arresting tuberculosis in man,

as he claims to have done in guinea-pigs, he will surely have done enough for one lifetime."

A few words regarding my own methods of treatment of pulmonary tuberculosis, and I am done.

I place great reliance upon inhalation; but it is inhalation of *dry* vapors—vapors, usually, of solids (powders), vaporized by heat (dry heat).

The device used by me is, in effect, simply a reduced old-fashioned portable heater.

An inside sheet-iron cylinder over the heat-generator, upon which I place my medicament, and an outside cylinder, also of sheet-iron, but covered with zinc ("galvanized"), to prevent too rapid loss of heat; the outside cylinder is connected by a pipe and rubber tubing, so as to be attached to a simple-valved inhaling-tube, which is used by the patient. The heat may be generated by a coal fire, kerosene oil, or gas. The medicines used in this way are generally—first, calomel, and, secondly, iodoform or creasote. Of course, I have tried many other things, but have fallen back mainly upon these: to be used every day, to every second day—to twice and once a week or less. I gradually increase the heat as the patient becomes accustomed to it, and as he bears it, to a pretty high temperature.<sup>16</sup> I have increased the body-temperature of the patient 2° F. at a sitting.

I am careful to instruct the patient how to do it, and then require very full and deep inspirations during the inhalation, showing him that he must make about a *third* continuous effort at inhalation to reach and disturb the residual air of the lung-apex—the usual original "nest" of the tubercle bacillus. Internally I administer iodoform, creasote, cod-liver oil, the hypophosphites, tonics, etc., and very little cough medicine. Good food as abundantly as possible, with an abundance of *out-of-door* exercise.

When they are able, physically and financially, I advise patients to arrange to live in a climate better adapted to their condition than is this, or at least to spend the latter part of the winter and the spring, until June, in a moderately warm, *dry* climate, such as may be found at the southern foot-hills of the Alleghany or the Rocky Mountains, particularly in Aiken, Asheville, or Thomasville, in the Carolinas and Georgia, and in Colorado Springs, Southern California, and Mexico or New Mexico, in the west. I never send tubercular patients to Florida or other moist southern locations. Patients convalescing from bronchitis, pneumonia, and some other acute diseases, will do well in Florida.

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<sup>16</sup> From 60° C. (140° F.) to 160° C. (318° F.).

Consumptive patients, in the extreme latter stages of the disease, should never be treated—or at least only with extreme caution—with what may be called *curative* remedies or measures. In nine cases out of ten they will hasten the death.

And consumptive patients in the extreme latter stages should NEVER be sent away from home to suffer and die among strangers. Palliative measures and medicines *only* are admissible then. Do what you may to nourish, soothe, and comfort the patient, and let him die in peace among his friends.

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### MEDICAL EXPERT TESTIMONY.

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A special meeting of the Medical Society of the County of Kings was held at the Society Rooms, 356 Bridge Street, Tuesday evening, January 14, 1890, at 8 o'clock.

The Secretary called the meeting to order, and, in the absence of the President, Vice-President and Senior Censor, announced that it would be necessary to elect a Chairman *pro tem*.

On motion of Dr. Raymond, Dr. Walter B. Chase was elected Chairman *pro tem*.

There were present, as invited guests, Judges Cullen and Bartlett.

THE CHAIR.—In behalf of the Society I desire to extend to the eminent men of the bench before us a cordial welcome.

The Secretary then read the following call for the meeting :

A special meeting of this Society will be held at the Society's Building, 356 Bridge Street, Tuesday, January 14, 1890, at 8 o'clock, to consider and discuss the following resolutions :

*Whereas*, The medical expert witness is at the present time held in less repute than formerly, and his opinions have lost much of their force with both judge and jury ; and,

*Whereas*, Such diminished respect for the medical witness tends to injure the profession as a whole and to lessen its influence ; and,

*Whereas*, It seems probable that the status of medical expert testimony may be improved by united and harmonious action of the profession looking toward that end ;

RESOLVED, That it is the sense of this Society that it is derogatory to the best interest of the medical profession for any of its members to occupy in a legal trial the position of medical adviser to counsel and witness in the case.

RESOLVED, That it is the sense of this Society that the physicians who are called upon to give evidence in legal cases with reference to the existing physical condition of patients should insist, if it be possible, upon meeting in consultation the physicians to be called by the other side, so that there may be a full interchange of views before they testify.

These resolutions were offered at the May meeting by Dr. Raymond, the Society voting to postpone the consideration of them until a special meeting be called, and that representatives of the legal profession be invited to be present and participate in the discussion.

THE CHAIR.—As Dr. Raymond was the mover of these resolutions, I will ask him to open the discussion.

DR. RAYMOND.—It is a matter of deep regret that so many of the members of the Society are absent to-night, as some of the absent ones are the most qualified to speak on the subject which we have met to consider, and are the most interested in it. The small attendance is doubly a matter of regret, inasmuch as the distinguished gentlemen who are present as invited guests may think that there is but little interest felt by the medical profession in the question before us. This, I am sure, would be a mistake. The sickness which has been so prevalent during the past few weeks is sufficient to account for the absence of many of our members. Our President and Vice-President are both confined at home with the prevailing influenza, and others of our associates are prevented from being here either by their own illness or by that of their clients.

The subject which is before us to-night for consideration has been brought to the notice of the Society for the following reason: It has for some time been to me a matter of mortification and chagrin that the medical witness was held in such poor repute by the press, the members of the bar and the courts, and I was led to believe, through conversation with other physicians, that the feeling was entertained quite generally in our profession that the respect in which the medical witness was formerly held was being rapidly lessened, and that the influence exerted by him through his evidence, when on the witness-stand, was being greatly impaired. That this sentiment also existed outside the profession I had still greater reason for believing when I saw the paper read by Judge Bartlett before the New York Medico-Legal Society, which has been published in full in *THE BROOKLYN MEDICAL JOURNAL*. After reading this paper, the question occurred to me whether something could not be done to remedy what appeared to so many as a great evil: and when I saw in the paper referred to the statement that much had been done in England to remedy this very defect, I could see no reason why we could not accomplish a similar result here. Now, whether these resolutions cover the ground perfectly, or whether the suggestion which has been made for a remedy is the correct one, of course it is not for me to say. It would seem, however, that the first thing for this Society to do is to decide whether there is a need for reform. Is it true, as a matter of fact, that when the medical witness of to-day goes upon the witness-stand he is looked upon with suspicion, and his every word

weighed by the judge and jury with prejudice against him? That this is so in very many instances I am afraid is the fact, and physicians have no one but themselves to blame for it. It is, I think, the exception to witness a trial in which medical men are engaged, as they so frequently are, without finding it degenerating into a trial of the medical witnesses themselves; and I do not know what would be the outcome were it not that we have judges who are able to keep the opposing interests from coming into direct collision.

There is but one point endeavored to be covered by these resolutions. They are simply an entering wedge, and the object in offering them was, first, to see whether this feeling which I had, and which I found others possessed, was the feeling of the Society. If we agree upon that, if we agree that there is a necessity for improvement, whatever that improvement may be, then the next step is to seek the way to obtain it. If, however, we find there is no necessity for a change, and that these defects are temporary matters of no great importance, then there is no remedy needed, and no plan need be devised to overcome or meet them.

The resolutions convey, in succinct and complete form, my own views upon the subject, and I have nothing to add to them.

DR. WALKER.—Has Dr. Raymond seen the resolutions adopted by the British Medical Association?

DR. RAYMOND.—I have not, my reference was to an extract from Judge Bartlett's paper, in which he refers to the "History of the Criminal Law of England," by Sir James Fitz James Stephen. The extract reads as follows: "If medical men laid down for themselves a positive rule that they would not give evidence unless before doing so they met in consultation the medical men to be called on the other side and exchanged their views fully, so that the medical witnesses on the one side might know what was to be said by the medical witnesses on the other, they would be able to give a full and impartial account of the case which would not provoke cross-examination." He truly observes that such a practice implies a high standard of honor and professional knowledge on the part of the witnesses called to give evidence; and the suggestion would seem almost Utopian, were it not that the writer adds: "For many years this course has been invariably pursued by all the most eminent physicians and surgeons in Leeds, and the result is that in trials at Leeds the medical witnesses are hardly ever cross-examined at all, and it is by no means uncommon for them to be called on one side only." This is the best possible answer to the objection that the plan assumes a higher standard of conduct than is practical. Experience has shown that it does not, and what English medical men can bring about in Leeds, American medical men ought surely be able to accomplish



in the city of New York." This paper was read before the New York Society, but "the City of Brooklyn" can be substituted in this instance.

Dr. WALKER.—I remember reading Judge Bartlett's address, but do not remember the details of it. It seems to me that his idea is excellent, and might be carried out in England, where perhaps there is a higher professional standard than here. I do not believe it could be carried out here. From what I have seen of medical witnesses on the stand, it seems better for the medical witness sometimes to be opposed by a medical adviser on the other side—of course provided they are both honest men. Now, I have no doubt that there are medical men who go on the witness-stand, and of whom it is true that they are paid to give certain evidence, and they give it. Some time ago I was approached by a gentleman connected with a railroad accident in which one man was said to have had a hernia produced. He brought suit against the company, and gained his suit. Another man, who heard of this suit, brought a second suit, on the ground that he also had a hernia produced, and the question arose whether the second man might not have had a hernia for a length of time and not have noticed it—whether there could not have been an incipient rupture. This gentleman from the railroad, when he first came to me, said he would like to have me appear as a witness for the railroad, and wanted me to prove that this man was not injured at all by the accident, and that he had an old hernia, and had known about it for months, if not years. In the course of conversation, when I told him it was a possible thing for a man to have a rupture and not notice it for months and years—that such a thing was possible—it was evident that he did not believe that that was so, and he asked me if I had ever known of a case, and when I told him yes, he said: "Then you won't do for me as a witness." But this gentleman had no trouble in finding a medical man to testify to suit him. This sort of obliging testimony has been given by medical men over and over again. For this reason a great deal of prejudice has arisen against medical men as expert witnesses. Again, most medical men believe—or at least those I have seen on the stand—that it is absolutely essential in talking to a jury that they should use technical terms, or, in other words, that if they do not use technical terms it would not be supposed that they had the necessary medical knowledge and skill. That, of course, to judges is known to be a fatal mistake, and that the man who goes on the stand and who uses only language rid of technical terms, and explains what he wants to in a straightforward way, and makes a statement which he can substantiate, will command the respect of judge and jury.

Another reason why medical men are sometimes put in apparently

a bad position is because so many of them do not understand that it is not always necessary to answer a question yes or no—very few knowing that when a question is put to them that might almost criminate them, that they have the right to appeal to the judge to ask the question, and that the judge would probably help the doctor if it was right to do so. Another reason is that in this State we see so many men who claim to be medical experts, and who are not experts at all. An expert is a man who is particularly qualified to testify in a certain direction. There are a number of men who testify that are not experts, and the mere fact that a young man has followed out a specialty for two or three years does not necessarily make him an expert in one or another direction. It is too easy for a young man who has been at a specialty for two or three years to come out and pose as an expert. Of course such a man must be contradicted by older medical men with larger experiences. Such a man consulting with a man of more mature thought, on the opposite side, might not be willing to come to a definite conclusion in consultation before a trial. Therefore I think, in certain instances, this consultation of the doctor upon one side with the doctor upon the other side will not always answer.

Dr. RAYMOND.—May I call attention to these resolutions, so that the points which are doubtful may be brought out here?

*Resolved*, That it is the sense of this Society that it is derogatory to the best interests of the medical profession for any of its members to occupy in a legal trial the position of medical adviser to counsel and witness in the case."

A medical man should certainly refuse to serve both as medical adviser to counsel and as witness. To see a medical man sitting at the arm of the lawyer suggesting questions for him to put to the witness, and suggesting questions for cross-examination, and then expect that man to go on the witness-stand and be a fair and non-partisan witness, is asking too much of human nature; few men can do it; and if any man does do it, he must not be surprised if his evidence is not received with its proper weight. The point endeavored to be made is that if a man is asked to testify in a trial, let him inquire whether he is wanted as medical adviser to counsel, or as witness; he should stoutly refuse to act as both. If he is to go on the witness-stand, let him keep away from the lawyer in court, and not suggest questions. The very moment that he suggests questions he at once becomes a prejudiced witness when on the witness-stand. If he acts as expert adviser to counsel, let him keep off the witness-stand.

*Resolved*, That it is the sense of this Society that the physicians who are called upon to give evidence in legal cases with reference to the existing physical condition of patients should insist, if it be possible, upon meeting in consultation the physicians to be called by the other side, so that there may be a full interchange of views before they testify."

This second resolution in substance demands that when a medical man is called upon to testify in a trial as to the existing physical condition of a patient, he should say to the other side, "I will go and see this patient only in the presence of the other medical expert." They could both together seek the truth and try to get at the actual facts. They may differ, and if they do, they can then go on the witness-stand and testify to that effect. It seems Utopian, but it has been tried in England, and has succeeded so well there, as the Chief Justice says, that oftentimes when one man only is called and the medical facts in the case are given by him, the judge and jury decide from his testimony alone. If this is possible in England, it is possible here; and let it once be known that the medical profession, as represented by this Society, have pronounced the dual position of any medical man as witness and medical adviser to counsel as being derogatory to the medical profession, no reputable man will assume that position, and if he does, he will put himself before the jury in such a light as will be most unpleasant for him, as indeed it should be. I think we should keep to these two points, and not wander in our discussion of the subject.

JUDGE BARTLETT.—It was far from my intention, in accepting the kind invitation of your Society to come here this evening, to participate in any way in the discussion; but since it seems to turn to some extent on the paper which I read before the New York Society of Medical Jurisprudence last spring, I will say a few words, although they will be only to emphasize the views which I then expressed. I can hardly state these views any better than they have been stated by Dr. Raymond, and I could hardly state the reasons for their expression more forcibly.

As to the first point, that medical men, considering only their own interest, and entirely independent of the fair administration of justice, should not appear as witness and counsel in the same case, I have no doubt whatever. The opinion which I expressed in my paper was the result of long and close observation at the bar and during all the time I have been on the bench. Since I expressed those views in New York they have been confirmed in a considerable number of cases. I said in my paper that it produced a very unfavorable effect upon the judge to see a man sitting beside one of the counsel in the case at the bar suggesting questions to him which he puts, often with very little intelligence, to another medical witness on the stand, and then to see the same man take the stand himself and testify upon the medical points in controversy. It produced a very unfavorable impression on the mind of the judge, and also gave the impression that the man could not be unbiased, and it is fair to say that if that impression was pro-

duced on the judge it would be also produced on the jury. I have always thought that if a medical man acts as adviser to counsel and subsequently as a witness, he puts himself in a false position, or at all events in a position where it is only natural that he should be misjudged and his motives misapprehended by those trying the case—the jury—and by the public, if the case happens to be one in which the public takes any interest.

Now as to the other point, that it would be very well that where a medical man is called to examine into the existing condition of the plaintiff in any given case, he should meet the medical men to be called on the other side. I think it would be very well if it could be done, but I doubt whether in the present condition of the medical profession, what I know of it in these large cities, it is practicable. But that is a question which you only can answer, and one upon which a lawyer or judge can give you no advice or make any suggestion of any particular value.

As to the other point, that doctors—those who consent to do it—injure themselves by acting as counsel and witness in the same case, I think there can be no question whatever. I think that is the uniform experience of lawyers who have given any thought to the subject, and in saying this I only repeat what I said before in my paper.

I will add this: that since that paper was read, on three separate trials before me there have been doctors, in two cases utter strangers to me, who have assumed the position that is recommended in this resolution, and have either confined themselves to act as medical adviser to counsel, or if they have acted as witness, have refused to advise counsel at all, in which respect I think they were extremely wise; and in these cases the result has been (this *may* have been a mere accident) extremely fortunate to the litigants.

As I have said before, the other matter is one upon which my views are not by any means so decided, and one which the doctors must determine for themselves, but that it is not wise for them, considering only their own interests, to appear both as witness and counsel, I am thoroughly convinced.

Dr. Fox.—Mr. President, I have written an article, giving my views upon this subject, which will require about fifteen minutes to deliver, and if it is the wish of the Society I shall be glad to read it.

On motion, the Society decided to listen to the doctor's paper, which was then read as follows:

MR. PRESIDENT AND GENTLEMEN:

That the medical expert witness is at the present time held in less repute than formerly, and that his opinions have lost much of their

force with both judge and jury, as stated in the call for this meeting, is true, no one familiar with medico-legal practice will deny.

I think it well worth our while to devote a few minutes' time to try to ascertain why this is true, and to see if some means cannot be devised, by lawyer and doctor combined, to remove this disgrace from the legal and medical professions.

It is my opinion that there are a number of reasons why the medical expert, especially the medical man who appears in the interests of private individuals or corporations, is in ill repute.

We will put such a witness on the stand and see how he fares.

Having been subjected to a direct examination, the cross-examination begins, and the usual questions, which are about as follows, are put to him :

"What is your profession?"

"Are you the surgeon for the railroad?"

"Aren't you also the surgeon for the steamship company?"

"Are you paid a salary to look after the interests of these companies?"

To this indictment, and others more insinuating, perhaps, the doctor pleads guilty.

The points brought out are gone over till there can be no doubt that the jury comprehends the meaning it is intended they should convey.

I believe the object of such an examination is to show that the doctor is a partisan, and being compensated by a corporation, he will of necessity give a favorable opinion for the corporation regardless of the truth. Now, I ask what could be more humiliating to an honest medico-legal expert than to have such insinuations cast upon his character? What must be the effect of such a procedure upon jury and spectators? Only one that I can see, and that derogatory to the witness. I assert that there are as scientific, sincere, honest and conscientious physicians engaged in medico-legal practice as in any other department of medicine or surgery. It has been my experience that the medico-legal expert's opinion in cases where the question of permanent disability has been the point of difference between the doctors whose evidence was directly antagonistic—the medico-legal expert's opinion has been the true one in every instance. You will ask how I know this? The cases which I have mentioned were three in number, and this includes all cases in my experience. I was on friendly terms with the injured parties, and was allowed to see them, or a relative, at stated intervals, and in every instance there was a complete recovery. The parties were not under my professional care.

This report is not the result of any examination that I made, but it

is simply the statement of the injured party herself or of a relative. I followed these cases after they had been disposed of legally, and my object for so doing was two-fold :

First, to find out if I had been recklessly swearing away the rights of others through ignorance, and,

Secondly, my object was purely scientific, to see if such serious consequences as had been pictured could follow seemingly trivial injuries. These cases occurred in the courts of this city and county, the opinions on each side were shared in some instances by men of recognized ability, and in other instances by men of questionable ability. There are men of both kinds in all professions and pursuits. Later on I shall refer to these cases again and to others, and the questions propounded by the court, with the medical man's answers given, will be quoted verbatim as copied from the report of the court's stenographer. These cases are not the offspring of an imaginative mind, but they actually occurred, as previously stated, in our city and county courts.

If anybody present doubts, then I shall be glad to furnish him with evidence enough to support my assertion. The speaker asks that his remarks be not considered egotistical if he refers to himself, for he is stating his personal experience, which it seems should be sufficient excuse for mentioning his own name. The medico-legal expert, having passed the trying ordeal of the legal examination, is frequently subjected to a medical examination, the question being propounded by the doctor and put by the lawyer.

Such an examination is sometimes conducted so as not to bring out the truth in the case, but to annoy and confuse the witness.

The two examinations to which I have referred are not calculated to put a witness at ease, to bring out the facts in the case, to do justice to all, which should be the sole end of all medico-legal inquiries, otherwise they become shams, mockeries, and travesties upon justice.

A third reason why the medical expert is in ill repute is because a member of the regular profession is sometimes called upon to give evidence and to have his opinion contradicted by a quack or by a man of such doubtful repute that he would not meet the aforesaid individual in consultation, nor could he obtain membership in any reputable society of this city. I will illustrate with an example : Some months ago a doctor (and I disgrace the word when I apply it to this individual) testified as to the nature of an injury, how he had done an operation, how he repeated the performance at the expiration of a few days, and how he did other wonderful things in connection with this patient. I had seen the injured party, and had made an examination, and it seemed to me that the treatment was faulty. It occurred to me to suggest the follow-

ing question to be asked by counsel: "What do you think of the treatment of this case?" The doctor seemed astounded that such a question should be put to him, and he replied: "You do not wish me to criticize myself, do you?" The lawyer retorted: "That is precisely what I wish you to do. I want to know what you think of such surgery." The doctor, very much crestfallen, replied: "I think it bad surgery."

Gentlemen, that surgery must have been questionable when its originator would condemn it before judge, jury and spectators, and yet I do not believe that man was honest enough to have told that he had mal-treated his patient. At any rate the direct legal examination failed to establish the fact. A verdict was rendered for the defendant.

This doctor was so versatile and so learned that it was only necessary for a patient to tell him the kind of treatment desired and he would proceed forthwith to administer it, for he claimed to be skilled in all the 'pathies, 'ologies and 'isms. Yet he would induce a patient to bring suit, was obliging enough to secure a lawyer for him, and would then go to court and pose as an expert, in order that somebody might be compelled, if possible, to pay for the results of an alleged injury and incidentally for his bad surgery. The cross-examination, in this case, proved to be his Waterloo, and yet this Society would condemn, as derogatory, the conduct of a man who acts as medical witness and adviser to counsel in such cases. I have already referred to the medical coach to counsel to condemn him when he uses his knowledge to confuse, to annoy, to mystify, instead of trying to make clear and to enable all sides to get at the facts, in order that justice may be secured. The medical coach is needed whenever reputable doctors disagree, and his presence is positively demanded wherever the quack or disreputable witness is to appear. In the former case he will assist in bringing out the facts; in the latter he will not only bring out the facts, but he may also be the means of thwarting, seemingly, legalized robbery. It has been claimed that a lawyer cannot conduct a strictly scientific medical inquiry. This is probably true, for he studied law and not medicine. And besides it is impossible, with the large field that both professions now cover, especially in the lines of specialties, for one mind to master both. Look at the opposite picture. What could be a more ridiculous sight than a doctor conducting a legal examination with a lawyer for a witness.

If these points are borne in mind I think that the medical coach's sense of propriety and usefulness will never again be questioned. The Society's resolution, viz.: "That it is derogatory to the best interests of the medical profession for any of its members to occupy in a legal trial the position of medical adviser to counsel and witness in the case,"

does not, in my opinion, express the views of the physicians who are practically familiar with this question, and I regret that the Society has ever voiced such a sentiment. Are the physicians of our city to sit idly by and see the innocent punished, or perhaps executed, the sane imprisoned, private individuals and corporations mulcted to the tune of thousands of dollars, on the testimony of quacks, of unscrupulous medical pretenders, because forsooth it is derogatory to a reputable medical man to appear in court as witness and adviser to counsel? Nay, my friends, we have a serious, solemn duty to perform, and it behooves us as the members of a noble profession to see that that duty is well performed. I have incidentally alluded to toxicology and insanity merely to call attention to them and to the more serious phase of the medico-legal expert question. I shall not pursue these subjects further, but suggest that at a subsequent meeting they should be discussed by men known to be learned on these topics.

I again refer to the three cases of alleged permanent disability to contrast the professional expert's opinion with that of the physician or surgeon usually called by the plaintiff, and who may, or may not, be an expert. I shall also try to give to them a moneyed value, for that is the reason suits are brought against corporations, viz.: to secure a golden poultice for an alleged personal injury.

CASE No. I.—It was claimed that the plaintiff had general paralysis, following an alleged injury received on the premises of the defendant, and was probably injured for life. Opinion flatly contradicted by defendant's physicians. Verdict for the plaintiff, and the amount given was four-fifths of what the defendant had previously offered for a compromise; in other words, the plaintiff would have received one-fifth more money if the case had not been tried. Scientific result: Plaintiff has entirely recovered from her alleged injuries, and the medico-legal experts' opinion has been vindicated.

CASE No. II.—Query by the Court: "In her case, can you tell with reasonable certainty what will be the result of her injuries?" Listen to the positiveness of the medical man's reply. "Yes, I can." By the Court: "Well, state it." "The result is that she will never be a well woman." This doctor was willing to testify that if this woman should ever marry she would never become a mother; he was also willing to testify to other improbable things, all of which were properly excluded by the Court as being too remote. This physician figures in the Medical Directory as a licentiate from a medical society, and I doubt if he has a diploma from any medical college. His opinion was contradicted by the expert. Verdict rendered for the defendant.

Scientific result: This woman subsequently married, and her hus-



band informs me that she is entirely well, and is now a happy mother. A second vindication for the expert's opinion.

CASE No. III.—Query by the Court: “How is it as to the permanency of these injuries?” Answer: “Answering that question on the ground of reasonable certainty, based on my knowledge of similar cases, I believe that it is permanent.”

This gentleman is an expert, and he teaches surgery, but the other experts were there, and they disagreed with his opinion. The jury also disagreed, and the case was subsequently compromised for one-tenth the amount for which action was brought. Although this expert stated that he intended to use plain terms, he persisted in calling a bruise a blood tumor, and further explained for the enlightenment of the jury that a blood tumor was a hæmatocele.

Scientific result: I later on saw the plaintiff walking along the street, and, noticing that she seemed to be in good health and had also lost her limp, I made inquiry concerning her health, and she told me that she had entirely recovered. A third and last vindication for the expert.

A fourth reason why the medical expert is in ill repute is to be found in the ranks of our own profession. I say it regretfully, that there are men in our profession who are unprincipled. I'll mention an instance. Only a few months ago a physician of this city testified in court that a woman, who had fallen and bruised her shin, had, as a result of this injury, developed traumatic pneumonia—a declaration as absurd as it was false. When asked to instance a similar case in medical literature, he was unable to do so.

The next medico-legal question that this physician will possibly have to hear decided will be, how long he can be imprisoned for a certain alleged criminal operation which he is accused of having performed.

When a physician so far forgets himself as to resort to procedures which bring not only himself but his profession into disgrace, he deserves not only the full punishment of the law, but also the severest censure and condemnation from the profession itself.

When the honest medical expert comes into court and states the facts in the case just as they are, he is seldom questioned by the expert on the other side. I have repeatedly refused to go on the stand under such circumstances, and have advised the lawyer not to ask the witness a single question; the truth had been told, and why shouldn't unseemly wrangling be suppressed? Let us observe the expert, whether he be at the head of some life insurance company, or in the employ of some other company or corporation. Is he not a graduate of some reputable

medical college? Is he not generally interested in the charities of the city in which he resides? Doesn't he hold membership in our best medical societies? Isn't he about as good a citizen as there is in the community? As to his skill and ability there can be no question, and this is practically conceded by the position he holds. Would the best business men in the community put a quack, an unskilled, unprincipled medical man, at the head of a business requiring the services of a physician? No, it would be unwise; it would be a poor policy; and, looking at the matter in its worst phase, it would be a poor investment. I defy any man in this room to point out anywhere a physician, other than such as I have described, who holds a position of expert to any company or corporation. Look at the experts in New York and Brooklyn and see to what class they belong.

The expert must, then, be a man of repute, of skill, of learning, of probity, and of the strictest integrity. Such an expert need never hesitate to appear in court. His presence, his evidence, and his well-known professional standing will combine to give his testimony its proper influence with both judge and jury. Such a witness may nevertheless be subjected to annoying questions and insinuations, the worst perhaps being that he is paid by a company or corporation, and will, of course, give favorable evidence for the party by whom he is employed, regardless of the truth. These insinuations are usually made by shyster lawyers; and why a reputable witness is forced in the temple of justice to submit to insults that he would promptly resent anywhere else, perhaps to the physical discomfort of his tormentor, is something I could never understand. There is no inducement for the reputable expert to sell his opinions to anybody simply for a fee. He is a man of such ability that he usually has a good private practice, and is not dependent upon court work for his means of livelihood. He is about the most independent medical man in the community.

I believe that there is a solution for the medico-legal problem, and I am willing to assist in any way that I can to bring about the much-needed reform. It is this: When the two or more physicians of the opposing sides cannot agree, let the court name a disinterested physician who shall meet the other physicians, and after an examination and an exchange of views, a majority report, properly executed, shall be presented or read in court by the disinterested doctor, the latter to appear in court to be cross examined by the opposing counsel. This manner of settling unseemly doctors' quarrels in court can never be carried out by mutual agreement between the two professions. It will require special legal enactment, which, I am informed by a representative of one of the best firms of corporation lawyers in New York City, can be secured. Let us, then, set out at once to accomplish this the

greatest of all medico-legal reforms. This manner of introducing medical testimony will not work harm to any one, but will, I believe, secure justice for all. We shall also then be able to obtain the testimony of the best physicians in the city, some of whom now refuse to do court duty because of the present ill repute of the expert.

The list of disinterested doctors from whom the judges make selections should be furnished by reputable medical societies. This list should be carefully prepared, and after each name a note should be appended stating in what particular line of practice the physician is skilled. In this way real expert testimony could be secured, for it would be possible to have skilled physicians and surgeons for special cases. How would the quack and unprincipled medical man fare? Suppose either of them to be the plaintiff's physician: the court's physician and the defendant's expert must meet either or both of them to examine the patient, in order that they may form an opinion concerning the case; but the quack and unprincipled man are forever debarred from airing their ignorance in court. No injustice has been done to either of them, for if the disinterested physician's opinion is the same as that of the quack's, that opinion will be given to the court, and *vice versa*.

Surely, no physician who has the welfare of his profession at heart would object to this way of settling differences and of removing disgrace from his profession. He is not, strictly speaking, consulting with quacks. He may meet them, it is true, but it is for an interchange of opinion, diagnosis and prognosis being the points considered, and treatment need not be mentioned, the latter usually being the object of an orthodox consultation.

The compensation of the different physicians should be as follows: The disinterested doctor should be paid an equal amount by the parties at law, the sum total to equal what he could ordinarily receive for similar services. The plaintiff's and defendant's physicians to be paid by plaintiff and defendant a fee for the conference equal to what they would receive for testifying in court. To summarize the benefits that would be derived from this mode of introducing medical testimony would be: honest opinions from skilled physicians and surgeons, valuable time saved to a number of physicians, because only the disinterested doctor would appear in court, and his testimony could be generally given without delay. No physician would object to giving his opinion in court. All unseemly wrangling and doctors' quibbling would be done away with, and the present disgrace would be removed from the profession. The quack and unprincipled man would be forever suppressed, so far as court work is concerned. Nobody would sustain a financial loss. I should like to hear this mode of reform

discussed by the legal and medical profession, and if a better one can be presented, we should all like to hear it.

A State Board of Medical Examiners will never do away with the present existing evils of medico-legal practice, for from the moment that politics are introduced the intended reform fails; for we practically jump out of the mud into the mire.

The Chairman then called upon Judge Cullen for his views on the matter.

JUDGE CULLEN.—Mr. Chairman and Gentlemen of the Society: I came here rather to listen than to advise, because although the evil which is the subject of discussion is plainly apparent to all of us who practice before the bar or who preside on the bench, still I am entirely clear that whatever remedy there is to be devised, that remedy must proceed from the profession of medicine itself.

It is undoubtedly unpleasant to a physician with confidence in the ability which he possesses in his profession, and the value of the labor he has bestowed upon it, and above all things, his supreme integrity of purpose in the utterance of the testimony he will give, to be confronted on the witness-stand by the cunning statements of empirics or quacks. But, gentlemen, we can be sure of one thing: that however much that may be to the physician, if those contentions do bring the medical profession into disrepute, they cannot be corrected at the expense of the privilege given to every citizen of calling on behalf of his case such witnesses as he sees fit. It is unfortunate that in expert testimony it should be so; it is unfortunate that the false statements of empirics may carry the jury as against the knowledge and experience of an eminent physician, or an eminent man in any profession; but one evil would be more serious, and that would be to deprive any litigant of the privilege of calling on his behalf to testify such witnesses as he may see fit. It is an old story in politics that the truth will prevail and that the exposure of error must be left in the world that freedom of discussion which is necessary for the evolution of truth. I say, therefore, even though some of you gentlemen may differ with me, that you cannot hope for any legislation which will limit the character of the expert witness to be placed on the trial of the case to those who may be named by the court, or picked out by any society. In fact, the tendency of the day is the other way. I do not want to enter into the discussion of the various schools of medicine, but as one school after another come up you would have to legislate as to each one of them. So that even to you who have the opinion that the true solution of the difficulty is that which was advanced by the last speaker—I say I am very sure that it is impossible of accomplishment. Your remedy here, gentlemen, must be among yourselves.

I am not prepared to say how far the remedy proposed by these resolutions would effect. It seems to me the first one is very well calculated to that end. It does not prevent the medical expert from appearing in court as a witness, and it does not prevent him from appearing as counsel, but it simply restrains him from appearing in both capacities, and would not carry that distinction between the two positions so far as to prevent the physician who is to be a witness from advising the counsel beforehand, either as to his testimony or as to the medical questions involved in the case. I think, however, as my brother has said before, that it certainly does prejudice any expert witness to appear during the trial of the case as suggesting questions for the line of examination to be put to the witness on the other side. It practically makes him the same as counsel. Undoubtedly that is sometimes done in our own profession, but a lawyer with a high sense of delicacy and honor will always avoid going on the stand in a case in which he appears as counsel. Sometimes it is necessary to appear as a witness, and then he gets another counsel to try the case. If he does go on with the case, as counsel, after having been on the witness-stand, he is always subject to the feeling from the other side that where his case is weak he went on the stand to pull it through.

As to whether you can, by any single act of this kind, greatly remedy this evil, or entirely so, of course I do not believe; but you can certainly reduce the extent of it. It will have to be done, however, principally by the highest sense of professional honor among yourselves. In the more obscure diseases physicians will differ, I suppose, but should not on simple subjects reduced to common knowledge. It seems to me, from my experience in court, that there ought to be some of the minor subjects in which the gentlemen in question should not be in flat contradiction; for instance, as to the measurement of limbs, or a case of length, when shortening has occurred, or some symptom of a well-known disease; it seems to me there ought not to be a disagreement as to these statements of facts. I think if physicians on both sides will regard disagreements of this nature occurring between them as reflecting somewhat on themselves, and somewhat on the profession, if they will be less dogmatic in the assertion of fact, have more regard to the statements of the opposing physician, where he is a man of character—if both sides will do this, I am inclined to think that it will have a tendency in a large measure to relieve the medical profession from the condemnation which they sustain as expert witnesses. Contradiction on the witness-stand as to matters which are common knowledge reflect on one if not both of the parties, and therefore they should be very careful in their statements as to fact, and each side should be very sure to see if possible by the

accuracy of their observation and their information that they are right before they make a dogmatic statement on one side or the other.

I came here to listen to you and not to advise, except to say this: That legislation will not cure this evil—the remedy lies with yourselves.

THE CHAIR then called upon Dr. Eccles.

Dr. ECCLES.—Mr. Chairman and Gentlemen: It would have been my choice to have spoken later. After hearing the pros and cons of a question of this kind, one is better prepared to definitely formulate a rational opinion. Since reading the published remarks of the learned judge, I find myself seriously disagreeing with him on several points. That the medical profession is sinking in public estimation, and that it stands much lower to-day than in the past, I for one cannot believe. The tendency seems to me to be an upward one rather than the reverse. It is quite true that increase of knowledge is revealing blemishes in the habits and powers of the profession, but these were all there before, and every generation discovers many such in the preceding. Their removal necessarily raises them in public estimation. The judge believes that for a medical man to appear in court both as witness and assistant counsel is a very serious blemish and one calculated to damage the dignity of the profession very much. Here again we disagree. The plan he proposes is all very well for the rich, but it is one that must to a very grave degree damage the poor. The man of means and the rich corporation can afford to hire separate medical men to perform the two functions, but once make it unprofessional for the poor men's family physician to help his lawyer as well as act as witness, and he will not be able to obtain justice. He has not the means with which to secure the services of medical experts. He is often even unable to pay the family doctor. In all such cases it is absolutely necessary for one man to fill the two positions if even a semblance of justice is to be had. It has been claimed that acting in the double capacity injures the party whom we would favor, since jurors are prejudiced thereby. This mainly depends upon the man. If the jury sees that he is earnest and honest, not forced along by malice or prejudice, that by no word or look does he convey a sense of bias, but only that of candor, no such impression will be likely to be left upon them.

That doctors differ is, and long has been, well known. That they differ more now than formerly is very questionable. When we consider the difficulties of diagnosis, the wonder is that they do not differ more. The difficulties of measurement in surgical cases have already been referred to. If here, where agreement might be most expected, we cannot secure it, what should be hoped for elsewhere? We all

know too well that, while fully honest, our best diagnosticians do differ in the most serious of cases. They may and often do actually occupy positions diametrically opposite of each other. One happens to be able to look further and see more of the multitudinous facts confronting them than the other. No living being can be master of all known facts cognate with and directly applying to even a single department of medical science so long as it is growing at the present rate. Their powers of induction likewise materially differ. A simple illustration, drawn from outside the region of medicine, will very fairly illustrate how honest men can easily be made to hold antagonistic positions. On board a ship three passengers get into a dispute with each other about the direction they are traveling. As they are walking the deck and facing the east, the first man declares that they are traveling eastward. To this conclusion number two objects. The ship, he says, is going westward at a greater rate of speed than they are walking, and, consequently, their direction is toward the west. Number three sides with number one as to the direction they are going, but objects to the rate of speed claimed. He thought that as the earth in its diurnal motion carries us eastward, the direction must be to the east, and, as the rate of speed is a thousand miles an hour, that is considerable faster than that claimed by number one. Until mutual explanations occur neither knows why the other disagrees with him. Each of the three men from his own standpoint is right. In anatomy, physiology and pathology similar states of affairs may arise. The men with most facts and widest mental grasp must necessarily be found contradicting those with fewer facts and narrower grasp.

One good reason for doubting the assertion that a patient's case is damaged in court by the doctor appearing in the double role of witness and assistant counsel is found in the fact that the best of lawyers have permitted it. Does it seem reasonable to suppose that they have gone on these many years sacrificing their clients' interest without finding it out, in a matter that must have been so patent? If true, some bright lawyer would have found it out long ago, and, by stopping it, have gained an advantage over his competitors.

The fact of acting as counsel makes a better witness of a medical man, and *vice versa*. He is thus put upon his mettle and feels that his reputation is at stake. He posts himself to the best of his ability, bringing to his aid the very latest available knowledge. To an expert, employed by the court, it would become a mere matter of business habit, and no such pains would be taken. With utter indifference as to who wins or who loses, the incentive to fresh and vigorous study is gone. With a novel position and desire to appear well, the reverse is true.

I was pleased to hear the judge say that to hope for aid from legislation is vain. It takes the world a long time to learn that legislative bodies can only ratify tendencies held by a majority. To pray to the legislative fetish for the removal of evils ingrained in human nature is a very common and very silly pastime. The evils that bring disgrace on the medical profession are due to the average human nature of that profession, and are no more amenable to the enactments of legislatures, than are the phases of the moon or movements of the tides. Until our average human nature improves, it is a vain hope to look for the bestowal of a higher meed of honor upon us than we now get and deserve.

Dr. WALKER.—I would like to ask the learned judge if the law has not made provision already for a medical referee in cases where there is a difference of opinion between medical men, and measurements have to be made, before whom these measurements shall be made by the physicians of both sides.

JUDGE CULLEN.—I know of no such law.

Dr. FOX.—Mr. President, the solution I offer I submitted to a firm of corporation lawyers in New York City, and they told me this matter could be accomplished; that is the reason I presented it to the Society to-night. It was not my purpose, either, to take away the right of any one to call in any witnesses he might see fit, provided the disinterested doctor appointed by the court should make a majority of those disinterested physicians who present the majority report in court.

Dr. RAYMOND —In summing up I have no desire to add anything to what I have already said, nor do I wish to appear as advocating these resolutions unduly. If the Society decides that there is no necessity for any action, I shall be satisfied that there is no such necessity; but if it is thought that a remedy is needed, then, that being established, the method of applying it should be discussed later. As to the advisability of legislation, I think that should be the last resort. This is a matter which is purely one of ethics. My idea is, that if the members of the Society believe that this evil exists, a resolution of this kind, if adopted, will be sufficient. It would certainly have its effect upon all the members of the Society, and upon all the reputable members of the profession as well, and there would be no necessity for legislation. A witness going on the stand and also acting as adviser in any case would at once put himself in a position antagonistic to these resolutions and to the position of the Society in adopting them—an attitude which no reputable physician would care to assume. Therefore, it seems to me if we should adopt any resolution of this kind, we would at once diminish the evil if not completely remedy it. The point which has been raised here as to the advantages of the rich over the poor, or



the disadvantage of the poor as compared with the rich, if I understand it, is not a valid objection. A subpœna will bring any witness, and it has been held repeatedly by our courts that a physician under a subpœna can be brought into court and can be required to testify, and if any case occurs where the rights of any poor person are at stake, I imagine a mere statement of that fact to the court would bring before the jury such expert evidence, without cost to the plaintiff, as would overcome that difficulty.

Dr. ECCLES.—The point is this: A subpœna will not call the medical man to assist counsel, so that the poor man has to pay for assistance to his counsel.

Dr. RAYMOND.—That point, I dare say, is well taken, and whether that difficulty could be overcome I am not sure; but I doubt if any poor man was ever deprived of his rights by his inability to get medical expert evidence. There may be such cases, but if there are I do not know of them.

JUDGE CULLEN.—In reference to the resolutions the doctor has given us, it seems to me both of them help to confirm the points which have been made. I imagine if the three men mentioned by Dr. Eccles were to get together that they could come to an agreement, and there would be no lack of unanimity in agreeing as to the direction in which they were going. I also believe the same in regard to the length of limbs, and that on simple things physicians should agree. We ought all to agree on methods of measurement, that a measurement taken from a certain point to a certain point is sufficient measurement of a limb. I imagine if two physicians came together and discussed the matter of measurement of a limb, that they would find that they were both in search of the truth, and would come to an agreement. If there was any difference of opinion, the point could be brought out in court, and they would have an opportunity to explain why they differ.

This latter resolution, therefore, it seems to me meets both of these points.

That the medical adviser to a counsel often brings out points not otherwise brought out is undoubtedly true. But it seems to me, if I know anything of human nature, that a medical adviser to counsel who had put a question through the counsel to a witness upon the stand testifying for the other side and had got an answer that was contrary to his own opinion, would not be apt to change his opinion when he was on the stand testifying; for, after having committed himself that such and such was the case, he would be very apt to stick to the same opinion; so I cannot see any possible advantage in having a man act as medical adviser and witness at the same time. The medical adviser is the one who brings out the facts, and certainly it seems to

me it would be very much more to the honor of the profession if the man who went on the witness-stand to testify to facts as he understood them were not the same man who sat at the arm of counsel interrupting him with questions to put the witness—questions adapted not to bring out the facts, but to entrap the witness, or to get him to permit himself to show his ignorance, and that is done by many men very high in the profession. There is hardly a man who has had experience on the witness-stand without an instance of that kind. If a man has previously been with counsel and advised him as to the questions to give him when he was on the stand, and firmly impressed them upon his mind, it is hardly to be supposed that that man will change his opinion when he goes into court; he is partisan from the first and will remain so.

In reference to payment to witnesses, no jury expects that any witness in a case, unless stated to the contrary, is there without compensation, and if the matter is put in the proper light, I doubt if it prejudices the jury. If, however, it is shown on the witness-stand that the opinion of a witness governs his payment, that is a different thing. If the opinion depends on the fee—that the opinion is to be favorable to the suit—that implies more. If, however, on the principle that his payment is a stated sum and if his opinion is adverse it makes no difference, the payment depending on the services and not on the result—if that fact comes out clearly, as it can, it seems to me that the witness is not prejudiced at all in the eyes of the jury. I am not clear, Mr. Chairman, at all about the remedy or feasibility of this remedy. I am satisfied that the evil exists, and it seems to me very plain that it is derogatory to a member of the medical profession to act as medical adviser to counsel and witness in the same case.

THE CHAIR.—What are the obligations of a physician to the public in this particular? A case comes into court, and there is doubt in the mind of the counsel, or possibly of the medical adviser or witness regarding those questions which come before the court, and Doctor A or Doctor B is suggested to the court as persons to be subpœnaed, or the counsel himself be given power to issue a subpœna to Doctor A or Doctor B—gentlemen not known to be experts. A medical gentleman who does not consider himself an expert being called in under circumstances like that—not a witness to the facts, but simply giving his opinion as to the evidence given in court—is he not entitled to compensation?

JUDGE CULLEN.—I think such a man cannot be called upon to give his expert testimony without compensation.

JUDGE BARTLETT.—I do not think that question has ever been settled, except in one or two cases in Southern cities. My impression is that any one who is a witness to the facts concerning the suit of the

litigant may be called upon to testify without compensation except the ordinary fee of the witness for his attendance; but if he is required to give special professional knowledge, I doubt whether he can be compelled to give it without compensation. I do not think it is clear that he can be compelled to tell what he may be able to say, as on the spur of the moment, without any particular research.

Dr. RAYMOND.—The point is this: If a man is called to testify in regard to the facts coming under his own observation, if he is asked for his opinion, he can be compelled to give it, provided he can give it off-hand; but if he gives an opinion requiring research, that can only be demanded after compensation. As there are so few members present to-night, and as the subject is of such importance, I would move that the resolutions lie on the table.

This motion being duly seconded, the resolutions were laid on the table.

On motion, adjourned.

W. M. HUTCHINSON, *Secretary.*

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## INCOMPLETE HEPATIZATION IN LOBAR PNEUMONIA.

BY GLENTWORTH R. BUTLER, M.D.,

Associate Physician to St. Mary's General Hospital; Assistant Physician to the Methodist Episcopal (Seney) Hospital.

Read before the Medical Society of the County of Kings, Sept. 16, 1890.

During the past five years I have seen three cases of lobar pneumonia characterized by what, for want of a better title, may be called incomplete hepatization. It is a condition easily overlooked, unless a minute and systematic exploration of the chest is practised. It is also, so far as reading and observation serves me, a variation in the course and physical signs of lobar pneumonia which has hitherto not been noted, except possibly in an indefinite manner.

Two of the cases were observed in the chest wards of St. Mary's General Hospital, the third in private work. A brief description of the first case seen will serve for the other two.

A male, aged 38 years, of only moderate physique, was admitted to the hospital complaining of cough, not severe, pains in the chest neither localized nor severe, loss of appetite, and feverishness. The attack had begun with moderate suddenness three days previously with chilliness, but not a distinct chill.

The patient was willing to admit a steady use of alcohol, with occasional excesses and a consequent irregular life. Otherwise claimed to have been in fair health.

The temperature was  $103.6^{\circ}$ , pulse 105, respiration 32, showing a pulse-respiration ratio of about 3.5. Sputum was scanty, light yellow, somewhat sticky and glutinous. There was some complaint of dyspnoea, but the nares were not acting. Bowels were constipated. Tongue rather heavily coated with yellowish-white epithelia. Complained of some gastric uneasiness and nausea.

Examination of the abdomen was negative except for epigastric tenderness. Splenic and hepatic dulness not increased.

Examination of the heart was also negative except that the first sound was weak and lacking in muscular quality. Examination of the apices of the lungs showed no abnormality beside a few scattered moist râles. The bases of the lungs posteriorly gave a similar result, and one was strongly tempted to put the case down as one of bronchitis with a continued fever. But the prominent symptoms, especially the pulse-respiration ratio, pointed toward a more severe pulmonary disease than a simple bronchitis. An inch-by-inch exploration of the chest finally revealed a strip of dulness, beginning just over the right nipple, one and a half to two inches in width, and running backward and upward to the corresponding axilla, a distance of about five inches, lying in the main between the third and fourth ribs anteriorly and the fourth and fifth posteriorly. Over this irregularly oblong area there was well-marked bronchial breathing, with its correlated voice sounds.

The after progress of the case was marked by a slow convalescence, the temperature fluctuating without regularity between  $100.5^{\circ}$  and  $102.5^{\circ}$ . There was, however, a fairly steady remission in the physical signs of consolidation, but not until three weeks at least was there a return of the normal signs.

The other two cases were in all essentials similar to the one first described. They were males. They were both debilitated, one from overwork and also from alcoholism. In all the symptoms were sub-acute in character, the temperature running to a moderate height only. Chill, pain and cough not of excessive or even very marked severity. The sputa were not of diagnostic quality. The location of the strip of dulness, and bronchial breathing with presumable consolidation, was practically identical. Convalescence was slow. Recovery occurred in all.

The latter circumstance prohibits these brief notes from having the scientific basis of a confirming autopsy. They have, therefore, only the value and trustworthiness which may belong to careful clinical observation.

An interesting point in these cases relates to the location of the consolidation strip. Recalling the situation of this area, viz., from a point just above the nipple in front and between the third and fourth ribs upward and backward to a point in the axilla between the fourth and fifth ribs, it will be seen that it coincides quite accurately with the lower border of the upper lobe of the right lung.

This aberrant and probably unusual limitation of croupous pneumonia, while unexpected, ought not to be surprising if the probable character of the disease in question is borne in mind.

I believe very firmly in the theory, as yet not absolutely demonstrated, that acute lobar pneumonia is an acute general disease with local and characteristic pulmonary lesions. It should be sharply differentiated from lobular pneumonia, the latter being a local inflammation caused by ordinary factors, the former due to some specific poison or poisons. The micro-organisms concerned in its production may be the "*Diplococcus Pneumoniæ*" of Franckel, the bacillus of Friedländer, or some other yet undiscovered. The question is certainly not yet definitely settled. Some of the arguments adduced in proof of the specific pathological character of lobar pneumonia may be briefly summarized:

The great variation in the intensity and fatality of different cases, different years and different groups of cases, the latter sometimes occurring with such frequency as almost to constitute an epidemic.

The numerous reports which point toward a certain degree of contagiousness. I saw, last winter, with Dr. G. R. Fowler, a family in which three cases of lobar pneumonia occurred, an interval of a few days only occurring between the onset of the disease in each case. With Dr. O. A. Gordon I saw in another family two cases, one treading close on the heels of the other. Such instances might be added to very largely.

The inception, course and pathological attendants of the disease place it apart from a mere inflammation of local origin. It has an initial chill, a fairly regular march of fever, and very frequently a critical day, which may often be predicted within average limits.

The facial expression is somewhat characteristic, the malar flush, the herpes labialis. There is no relation between the amount of the lung involved and the duration and intensity of the prominent symptoms.

Its frequent effects upon the nervous system are worthy of note in this connection. The apical form of pneumonia in children with, in my experience, the not very rare accompaniments of deafness, convulsions and coma, is a case in point. The simulation of meningitis is at first glance very close.

The perversion of the pulse-respiration ratio is not always greatest with the most extensive consolidations, thus indicating some other influence than that of the local lesion. Nor is the rapidity of the respiration, taken by itself, a reliable index of the number of lobes involved. The explanation of heart failure in this disease which attends the difficulty so frequently experienced by the heart in doing its work, to the mechanical restraint and the obstruction to the pulmonary circulation caused by the consolidation, does not to my mind fully account for the commonness of the condition. Signs of obstructed circulation and difficult heart action are by no means most frequent with the most widespread hepatization. And the rapid disappearance of apparent cardiac asthenia coexists with unaltered physical signs. While the mechanical explanation accounts satisfactorily for a proportion of cases, yet there remain others in which some special depressing influence upon the cardiac nerve mechanism must be invoked.

If we accept the theory that lobar pneumonia belongs to the specific febrile diseases, the cases which I have related are capable of an explanation which is a mere begging of the question. In this view the peculiar position and limitation of the consolidation with the subacute course of the disease, constitutes a variant of a specific malady, holding a place in common with the vagaries of other diseases dependent upon a special cause. They were not abortive cases, for the term implies a premature ending.

From the practical side these cases simply impress the necessity of a searching and minute exploration of the chest before the possible existence of pulmonary disease is denied.

#### DISCUSSION.

Dr. WEST.—I do not know that I can add anything on the subject. This paper of Dr. Butler's reminds me of a case which I saw in the early part of the summer, where I made a diagnosis of a limited partial consolidation. It was in an intemperate man about forty years old, who had been sick some days before I saw him—if I remember rightly, some six or eight days. He had been subjected to exposure, and during a week or so simply complained of lassitude, with the attendant symptoms. Three days before I saw him he was seized with a chill and bloody expectoration—rusty sputa. When I saw him with the attending physician, the doctor was unable, or had been unable up to that time, to detect any evidences of consolidation. In the right chest, lower down than the doctor speaks of, but assuming a very similar curve, probably corresponding to the lower part of the second lobe, I detected a line of consolidation—a strip of about an inch, I should

say, in width. Over the rest of the lung respiration was perfectly normal. This man, however, had very decided constitutional depression; his pulse was so rapid that it was impossible to count it; indeed, he was at the time almost moribund, the respiration being very much accelerated. He lived about thirty-six hours. There was no other evidence of pulmonary disease that we could detect. Over this narrow strip the bronchial breathing, the increased voice sound, the dulness, were apparent to the doctor, and equally to myself. The man died at the heart. We both of us were very anxious to get an autopsy, but were unable to do so. I do not know in that case but that it was one of those instances which we sometimes meet where the trouble begins in the centre of the lung and travels out, so that you fail to get physical evidence of a consolidated lung until later in the disease; but certain it is, with any means which we were able to use, this single strip alone was discovered. I most cordially endorse what the doctor says about the infectious character of pneumonia. It seems to me that I have seen it so many times, without doubt, acting in such a way; as for instance, where you see a husband and wife stricken with the same disease within forty-eight hours of each other, and many such instances might be related.

Dr. CHASE.—I would like to inquire of the gentleman who has read this very able and instructive paper, or of the gentlemen who have discussed it, whether there is any probable relation between this form of pneumonia so concisely described and that which has been written upon, perhaps more fully in former times than at present, latent pneumonia. Such cases as these under consideration require very careful examination to detect the area of consolidation. Whether or not the cases of latent pneumonia are those in which the hepatization began, as suggested by Dr. West, in the interior of the lung and extended outward, or whether they are cases in which more careful clinical observation would have discovered the presence of consolidation. Perhaps the doctor will give us his views on the question of latent pneumonia.

Dr. BUTLER.—I believe, Mr. President, that latent pneumonia is most apt to occur in elderly people, and presents no symptoms which attract attention to the chest as the source of the disease; whereas in the cases which I saw, it was rather evident that there was some trouble in the chest, but it was only by a very careful examination that it could be found. In my cases the patients all recovered; I had them under observation all the time; and if they had been examples of consolidation commencing in the centre of the lung, I probably should have discovered it. But the physical signs did not increase. And yet they were not abortive cases, for the simple reason that the disease did not

stop abruptly, but continued. The only common resemblance between latent pneumonia in elderly people and the cases which I saw, is that in both there is debility; in the one case from old age, and in the other from intemperate habits of life and from overwork. So that there is no apparent connection between latent pneumonia and the cases which I have reported.

THE CHAIR.—It was for the purpose of defining the difference that I requested the doctor to give us some suggestions on that point.

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## THE MORNING HEADACHE OF CONTINUOUS TIRE AND EXHAUSTION.

BY WILLIAM BROWNING, M.D.

Read before the Medical Society of the County of Kings, Sept. 15, 1890.

If any excuse is needed for again bringing up the subject of headache, it is furnished by the frequency of this complaint and the fact that it is one all physicians are expected to treat. Furthermore, the experience of Seguin, as given in his recent "Toronto Lectures," is worth recalling. He says: "I would here express it as my deliberate opinion, as the result of much study of the subject, that there is no problem presented to the physician so difficult as that of the pathology and therapeutics of a chronic headache."

Nor, despite innumerable articles and many valuable observations, is the subject as yet very fully worked out, especially as to the clinical differentiation of the various forms of cephalalgia. Of course, we all know that with the so-called functional disorders all manner of intermediary and mixed forms exist.

There is a peculiarity in many cases of headache to which little attention has been paid.<sup>1</sup> It might naturally be expected that long, deep sleep would so far rest and refresh the brain and its accessories as to leave the person free from headache on waking, if at any hour in the day. On inquiry, however, it may be found that the suffering is greatest at this particular time. A series of these pretty frequent cases indicates that they have in general a common cause. Before giving them, however, it may be well to recall the condition of the cerebral circulation

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<sup>1</sup> Hamilton ("Modern Treatment of Headaches," 1888, p. 341) says: "The anemic headache is more pronounced in the early part of the day. In fact, the patient commonly awakens with some nausea and head distress. This may often be abated by a cup of strong tea, or ammonia in some form."



during sleep. We know that the pulse rate and the arterial pressure diminish on lying down and still more in sleep—*i. e.*, the general circulation becomes less active. Further, as regards the brain circulation in particular: it has been shown by a variety of experiments, contributed by many investigators, that this is materially lessened during sleep. It is simply echoing a well-recognized fact in physiology to state that sleep is attended by a relative anæmia of the brain. (This is not saying that the anæmia produces the sleep, though it may in given cases favor it.)

Without deciding in what particular encranial structures the pain originates, it is usually accepted that anæmic conditions are causative of headache. It is almost an adage to say that pain is the cry of a hungry nerve for food.

In simple tire the circulation, when the individual ceases all effort, becomes correspondingly weaker.

Since, therefore, the brain and its envelopes are normally more anæmic in sleep than at other times, we might, after all, theoretically presume that a headache from overtire would be severest on waking, especially from deep sleep.

Whether the impoverishment due to blood of a poor quality is as harmful as that due to a diminished quantity passing through the brain, raises the further query whether it is the anæmia *per se* or the reduced pressure, intravascular and intracranial, that is the chief factor. Various observations indicate that the latter is considerably the more important, though of course even then an anæmic person would more readily develop this condition.

CASE I.—Book-keeper, about thirty-five years of age. Seen in the summer of 1885. He is spare, of slight build, noticeably pale and listless, strictly temperate, and not a user of tobacco. Has rarely had a headache in the past, and then not like the present. For a long time, and with practically no recreation, he has been confined to his work, early and late, often well into the evening. Finally he was interrupted by sickness in his family, lost sleep, and began to have severe headache. It is now throbbing, and affects rather more the frontal region, but may at times be severer over the lateral portions of the head or even at the vertex. Though of daily recurrence, it is decidedly worst on waking in the morning—*i. e.*, before rising—at which time he also feels generally miserable. On getting up and moving about, it relaxes somewhat, so that by noon he is fairly comfortable. As evening comes on he feels tired and more inclined to headache. He goes to sleep immediately on retiring, is an unusually sound and long sleeper, and is rarely troubled with dreams. No constipation or indication of digestive troubles. Appetite good, except when suffering pain.

He rested for a time, then went to the Massachusetts coast with a bag of Bland's pills plus *nux vomica*. He returned greatly improved, subjectively and objectively. With some further attention he made a complete and lasting cure.

The recognition of the real cause was in this case of considerable importance to the patient, as the existence of old ear-trouble and a spot of tenderness behind the ear had led him to fear the formation of an abscess. Further, the time at which his ailment developed excludes eye-strain as a special cause.

CASE II.—Servant-girl, twenty years of age. Seen in August, 1885. Has suffered from headache now and then; but this has become much worse the sixteen months in this country. It is now frontal, and worst directly on waking in the morning. After getting up and doing something, it greatly improves; but toward evening may get worse again. She tires easily on exertion, and is troubled with shortness of breath on going upstairs or doing any hard work—of which she has much more than when at home. Sleeps well and without dreaming. Is rather pale, but flushes easily. The heart-action is fair, and there is no thoracic trouble to account for her symptoms. So far as determinable, no digestive troubles. From her history and appearance the diagnosis of mild chlorosis seemed warranted, and on corresponding treatment she improved rapidly.

It must not be inferred that the headaches of chlorosis are all of this kind. While the anæmia was the prime cause, overwork, relative to her physical condition and to her duties in earlier life, and some limitation of her accustomed hours of sleep, determined the particular type.

CASE III.—Market-boy of eighteen years. October, 1886. Has always been healthy. Looks strong and robust, though not quite fully grown. No bad habits. Of late he has been working in a market, where he had to be up at 5½ A. M., and did not get through until 10½ P. M., or at times until midnight. For three weeks he has been suffering from headache across the sinciput and forehead. This has become so severe that he has twice had to stop work, and his family fear some beginning head trouble. Has never suffered from anything of the kind before. The back of the head has remained quite free. His headache is worst in the morning on waking, before he gets up. The cup of coffee at breakfast brings entire relief to the ache in a few minutes. Then, on going to work hard, it returns. After being up awhile, lying down tends to relieve it. It is bilateral, not beating, but dull and continuous. Sudden movement of the head greatly aggravates it. Appetite good, bowels regular. He goes right to sleep directly he has a good opportunity, and sleeps soundly until he has to get up. No dreams;

no tinnitus; no twitchings; no fever; no pain except in the head; no tenderness about the head; pupils show nothing abnormal; pulse fair, though easily wavers a little in rhythm. The urgent necessity of rest was made clear. On attempting to resume his place, there was a return of the trouble. After securing an easier position, allowing also more hours of sleep, his head ceased to trouble him. The possibility of shamming was here excluded, among other reasons by his earnest desire to help support his mother.

Of earlier cases no notes were kept, and of later confirmatory ones only the following will be given, since here evidently there was not alone anæmia (oligocythemia), but also a reduction in the quantity of circulating fluids:

CASE IV.—Mrs. R., thirty nine years. Seen last spring. Menorrhagia: flow too frequent, prolonged and profuse. She is weak, pale, exhausted, and has lost flesh. Mornings she is specially weak and suffers from a general headache. This is directly on rising, which in her case means also on waking, as she has a large family and has to have an early breakfast for her husband. Afternoons she feels much better. Appetite good; sleep excellent; bowels regular; some palpitation. By checking her losses and treating the anæmia, relief in every respect soon followed.

CASE V.—A good illustration of this class of headache is given, in another connection, by Dr. W. Ingalls, in the *Boston Medical and Surgical Journal* for November 10, 1881:

“Case III.—A married woman, aged forty, tall, well formed, of light complexion, has always been a worker; has been married sixteen years; her oldest child is thirteen and her two other children are ten years old; she had a miscarriage at two months, five years ago; is a housekeeper with love of order and neatness in excess, which, as she keeps no servant, causes her great labor. Her children are almost entirely clothed by her own hands. Her husband is a skilled workman, and must have his breakfast and be out of the house by seven o'clock; his dinner must be ready at ten minutes past noon. This is a mere outline of her life. To bed at ten, she rises at five. Note this: rarely does she go out of the house except as a matter of duty.

“About seven years ago she awoke one morning with her first headache, which filled her with astonishment, so great was the pain, but as the day wore on the trouble diminished, and this is often the case with her. Headaches, sometimes with, and sometimes unaccompanied by, nausea, have pursued this patient all this time. The bodily functions for the most part are in good order. Occasionally there is a restless night, but generally sleep is sound and sometimes profound; quite frequently at the five o'clock awakening she is heavy with sleep, but the

morning duties are, to her, inexorable, and there is no "folding of the hands." Since the miscarriage the headaches have been no more severe than they were before.

"Five years ago the patient took a vacation for five weeks at her old home far down East. During the first two weeks there her headaches and her general misery were indescribable; but from that time an amendment took place, and she began to make visits and to ride and walk, and was free from suffering, and became well and strong. The amendment continued for a week or two after her resumption of her home duties, since which she has been as she was before. She is exempt from her malady about three-fourteenths of the time."

There are certainly various other causes of morning headache. Among these are: Disturbed and dreaming sleep, a large late (undigested) meal or other error of diet on the previous day, and poisoning by inhalation of bad air (from exhalations in poorly ventilated chambers, from leaky gas-pipes, sewer-gas in rooms, etc.). So-called periodic headaches also not infrequently begin on waking. But in these cases the trouble does not recur daily nor in other ways conform to this type, though some similarity in pathology is possible. On the other hand, of course a person subject to the headache of tire may bring it on at any time in the day, only the most marked characteristic is the morning recurrence.

The drinker's matutinal sufferings—*Katzenjammer*, hot coppers, swelled head—may pass for an acute and artificially produced example of this trouble. The alcohol first stimulates the circulation and perhaps more directly the nerve structures. Often there is some loss of sleep. Then comes the reaction, increased by the depression that sleep brings, and by nausea of gastric origin. His morning "eye-opener" refreshes his feelings by stimulating anew.

The characteristics and co-symptoms of this type of headache, when uncomplicated, may be summed up as follows:

1. A history of tire and exhaustion from prolonged and over work, often also in part from short hours of sleep and anæmia of whatever origin.
2. The common occurrence and greatest severity of the trouble on waking.
3. Its improvement on gentle exercise or on taking a hot or stimulating drink; sometimes growing worse again later in the day.
4. Its frequent, even daily recurrence.
5. Its dull, non-throbbing, non-neuralgic character.
6. Any part of the head may be involved, though oftener the frontal.
7. The person sleeps with the head low.

8. Sleep comes easily, is deep, and is rarely disturbed by dreams.

As to the other symptoms, dizziness on suddenly rising, nausea, etc., may or may not be troublesome. Though only occasionally are there points about the head tender to pressure, yet, as in many chronic headaches, there may be a number of fixed or constant points about the cranium that are exquisitely sensitive to even a very gentle faradic current.

Treatment must correspond to the cause. Usually this can be remedied, and then the prospect of relief is excellent. Recreation—rather than full rest—is often more important than drugs. In younger people, feeding, iron and general tonics do good.



## OBJECTIONS TO THE GENERAL USE OF HYPNOTISM.

BY W. H. B. PRATT, M.D.

Read before the Medical Society of the County of Kings, September 16, 1890.

The decade last past has abounded in publications on the subject of hypnotism in its relation to therapeutics. Each succeeding year the subject seems to have gained an increasing number of earnest, enthusiastic investigators, until the books and papers devoted to its consideration at the beginning of the present year exceeded one thousand in number. It has also been considered of sufficient importance to engage the attention of European medical congresses and societies—special meetings for its discussion having been accorded it.

Interest in the subject has by no means as yet begun to decline. Judging from the frequency of articles in the medical journals, urging its therapeutic value, and the very whirl of extended notices given it almost daily by the non-scientific press, there is strong promise that the close of the present year will register a large addition to the already copious literature placed to its credit.

With such a busy corps of workers earnestly and ceaselessly advancing its claims for immediate recognition, as a new and important addition to the medical armamentarium, it seemed to your Committee that the time was ripe for an exchange of views and experiences in this Society on the “suggestive treatment.”

In trying to acquaint ourselves with its theories and methods, and the appropriate conditions under which a trial of its powers is indicated, we are met by the claims of two distinct schools: the Salpêtrière or Charcot school, which affirms that the production of the hypnotic state

is limited to hysterical subjects, or at least to those who are neurotic with a strong tendency to hysteria; and the Nancy or Bernheim school, which teaches that hypnosis can be induced in a large majority of healthy persons.

Where the truth lies in these opposing contentions can only be settled by further knowledge. I believe that the views presented by the Salpêtrière school will receive final indorsement, and that the more general acceptance just now accorded the Nancy claims is the result of the more zealous propagandist spirit which has taken possession of its coterie of investigators.

Hypnosis, as defined by Bernheim, is "the induction of a peculiar psychical condition which increases the susceptibility to suggestion." Such a definition fits admirably all the methods that have set up their claims for working supernatural cures as far in the remote past as history reaches. Conjuraton, sorcery, incantation and divination founded a belief in themselves which lasted through thousands of years, by the ability of the priestly craft to bring the minds of men into this very "peculiar psychical condition." As the centuries rolled on, charms, amulets and the royal touch exerted their mystic power by the same means; and, in the more recent times, mesmerism, clairvoyance, prayer cure, faith cure, mind cure and Christian science have each worked its own marvelous cures, the same "psychical condition" being a *sine qua non* in them all.

It is like the old play of "Masks and Faces:" the mask changes, and the deception is so clever that we are ready to believe that a real change of individual has taken place; but it turns out, after all, that, with the appearances of reality, they have been only masks, and that one face and voice has been behind them all. It seems to have been reserved for scientific research, with its indefatigable laborers, to add to its long list of honors that of tearing away the last of these masks that have been deceiving mankind, and revealing the true face of the apparent miracle-worker, in modern hypnotism.

But what is this "peculiar psychical condition" which must be induced before one can experience the full influence of suggestion?

I am best satisfied with the definition that it is "the abnormal state produced by concentration of attention, and abeyance of the will." Reason and Judgment abandon their seats, leaving Imagination in uncontrolled authority. In such a mental state, fancies are realities, fictions are accepted as facts, and the false has nothing to differentiate it from the true. All things are real, all are facts, all is truth.

That such a psychical condition can be produced in a large percentage of selected subjects is so fully and satisfactorily attested, that we are compelled to give it our acceptance. Many, however, of the

extraordinary results claimed by the enthusiastic explorers and auto-hypnotized experimenters cannot command the credulous reception of the general profession without still further proof, and it is probable that future experience will show that many authors have greatly exaggerated its value.

If the relief afforded suffering humanity is the correct measure of value to lay down on every claimant to therapeutic power, then the shibboleth of "suggestive therapeutics" has not fairly gained for itself a just claim of superiority over the methods displaced.

It is, however, a sufficient honor that a rational explanation has, through it, in our time, been given to psychological phenomena that previous to its illumination were shrouded in the misty atmosphere of hypothetical suggestion.

That the old methods of working through the imagination were as fruitful in relieving physical distress as our latest cult is fully maintained by the historical records. Perkinism, with its metallic tractors, a product of Connecticut which flourished just one hundred years ago, is an historical movement well known to us all. It captured the confidence of large numbers of people, many of high station and influence, and by the suggestion of cure that was presented in their manipulation wrought results so startling, in relieving the many ills and pains of life, that a considerable part of the community, seeing the success attending them, wondered and fully believed that a veritable panacea had at last been discovered. Its conquests were not confined to its native land. It was not timid in essaying its power under foreign skies, and the tide of success rose as high in Europe as in its modest New England home. The claims advanced for the tractors read as though published in last month's *Revue de l'Hypnotisme* on the therapeutic uses of hypnotic suggestion. These instruments were advertised for the cure of insomnia, rheumatism, neuralgic pains, inflammations and even tumors—all of which has a suggestively familiar sound.

Again, the world is not yet freed from witnessing the successes attending the formula that the potency of any drug is in the inverse ratio of its dilution or trituration—a remarkable exhibition of what the imagination can do in those "peculiar psychical conditions which increase the susceptibility to suggestions."

Still again, thousands of poor sufferers, in the same psychical condition, with their minds concentrated on the one thought that Divine Power has in store for them the restoration to health which they so passionately crave, make their long and painful pilgrimage to the healing waters of the fountain at Lourdes, and return to their homes leaping and shouting, and praising God.

It is with a feeling of profound gratitude to the French schools that

the key to the solution of all these varied forms of cure has been handed to us. But when a new system of therapeutics based on this discovery is at the same time held out for our acceptance and general use, the conservatism of our profession, which has so often been a shield and buckler for our defence, wisely declines to give a full endorsement to the new teachings until a further and more extended investigation, and the statistics gathered from a much longer series of experiments, shall verify the asserted value of the system.

The essential feature that characterizes modern hypnotism, and distinguishes it from the older parallel manifestations, lies in the close relation of the subject hypnotized to the personal hypnotizer. "In the hypnotic state the subject's mind retains the memory of the person who has put him to sleep. Whence the hypnotizer's power of playing upon his imagination, of suggesting dreams, and of directing the acts which are no longer controlled by the weakened will."

The profounder the hypnosis the greater grows the power of the hypnotizer, until the influence over the subject is absolute, and a condition of complete automatism is reached. The hypnotic degree at first attained in a given subject may be but slight. We are urged, however, not to be discouraged, that the power of the operator will increase, as a rule, at each sitting, and that finally, in some cases, the power gained enables the hypnotizer to throw his subject into hypnosis by a look.

In the advanced degrees the ability of imposing on the patient post-hypnotic suggestions is reached. The extreme phenomena made possible in this condition, of profound somnambulism, cannot, we are told, be obtained in all subjects, but in all cases there is an increased susceptibility to suggestion. In this state the hypnotized one is powerless in the hands of the operator—obedient to his suggestions, not only at the time, but after the lapse of long periods.

Coming from the imposed sleep, amnesia is complete, and his acts, seeming to him to be dependent on his own volition, are those stamped upon his cerebral centres by the operator, from the carrying out of which he cannot escape.

Who can fail to see that the end of such a series of experiments, even with an eye single to its therapeutic power, will inevitably result in a disturbance of the healthy balance and equilibrium of the cerebral activities, and lead to all the evils attendant on enfeebled volition?

Doubt is expressed as to the permanent character of the cures effected by this means; but granted all the permanency claimed, and its success in all the variety of pathological conditions that the advocates of this treatment assert can be cured through its instrumentality, and yet it seems clear to me that a possibility exists that, along with the



physical relief, runs the tendency to such an impairment of the psychical individuality and independence, though relieved from present ills, the last end of that man may be worse than the first.

The *material* agent creating the suggested benefit, such as the charm, the amulet, the drop of water, the bits of metal, the infinitesimal dilution, with or without an accredited association with Divine Power, is direct in its action and susceptible of only singleness of purpose.

In the substitution of the *human being* as the suggesting power, the character of the suggestions given, from this directness and singleness, at once becomes potentially as diverse and many-sided as the thoughts, passions, fancies and desires that find lodgment in the mind of man. I simply present the changed situation, and will not attempt the deduction of the possible results.

The specific dangers, recognized and noted by the investigators on this subject, I will not give in detail. The character, however, of the dangers admitted is enough, in the event of a general and widespread practice of the art, to foreshadow a radical revision of our criminal laws and the introduction of many new factors into our sociological problems.

Bernheim, full of enthusiasm over the benefits, through hypnosis, that are close at hand for one who would but reach out and dispense them, closes the preface to his last edition in these words: "Suggestive therapeutics, accepted and practised by all physicians, will be one of the fairest conquests of contemporary medicine."

The fulfilment of this enthusiastic prophecy, when every physician is daily to try his powers of hypnosis, by the latest methods, over the already nervously disturbed patients that come to him for relief, would, I fear, act as a blight upon the virile rational therapeutics of to-day and envelop it in a cloud of sentiment, fancy and imagination.

There is a reasonable doubt that it will ever prove itself of benefit in a class of cases sufficiently large to warrant its general use. But in view of the dangers recognized, the time is certainly not yet for its common and unrestrained practice.

I believe that the State, as she now protects against abuses in mental diseases, should throw guards and guaranties around society to protect against this potential enemy of mankind, until further research, away from the atmosphere of blinding enthusiasm, shall finally determine its proper position in practical medicine.

# THE BROOKLYN MEDICAL JOURNAL.

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## *EDITORIAL.*

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### THE POPULATION OF BROOKLYN.

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The subject of population is always one of great interest, although the reasons therefor are various. Rivalry between neighboring cities is often the only motive which excites this interest. Health authorities have a higher motive than this: it is their pride to point to a low death-rate, and as the computation of this depends on the population, it is very important that the methods by which the enumeration is made and the results should be trustworthy and such as to inspire confidence.

The United States census of 1880 gave Brooklyn a population of 566,689. The State of New York should have taken a census in 1885, but politics prevented, so that when 1890 came the population of Brooklyn was simply a matter of conjecture. The basis for estimation was for some the directory, and for others the number of houses. Every one appreciated the fact that the city's growth had been phenomenal, and that any estimate must rest solely on the judgment of the one who made it. When, therefore, the U. S. census was taken in June, and the result announced, there were various opinions as to its reliability. The figures have not been announced officially, but are said to be 804,377, showing an increase of 237,688 in ten years. A most

gratifying exhibit, truly; but still there was so much doubt felt by the city authorities that it was determined to take a new census. The discrepancy was very marked when the results of the U. S. census were compared with the estimate of the Health Department. This estimate placed the population of Brooklyn, April 1, 1890, at 859,612, and July 1st, 871,852. This showed a monthly gain of about 4,000, so that at the time the U. S. census was taken the population according to the estimate of the Health Department was approximately 867,000, a difference of 63,000. The new census was ordered to be taken by the Police Department, and the arrangements were entrusted to F. S. Dallon, the efficient and experienced Deputy Commissioner; 117 men were detailed for the purpose, and the enumeration was made by election districts, of which there are 648. The record to be made was of the street and number, the name of each individual, whether male or female, adult or minor. This census was completed in twenty-two working days, and with the result of giving Brooklyn a population of 853,945. This may be taken as the population of the city on November 1st. If we assume that 4,000 is the monthly increase, as estimated by the Health Department, then the U. S. census would be for November 1st, 820,000, or 34,000 too few; while the figures of the Health Department would be 884,000, or 31,000 too many. Of course these latter figures are round numbers, no attempt having been made to calculate them to a nicety. The monthly estimated increase of the Health Department would seem by these figures to be too high. We should be inclined to regard the census taken by the police as nearly accurate as any census can possibly be; doubtless there are some errors, but these cannot, we think, affect the result materially.

It seems to us that this police census has demonstrated that the most efficient way of taking the census of a great city is through the police force. It is certainly the most economical; the entire cost of the recent one being but \$700, the amount paid for stationery. We would suggest to the authorities the advisability of taking a census of the city yearly, and that this be made the basis for the computation of the death-rate.

The present position is an embarrassing one. What figures shall be used by the Health Department in its calculation? Believing as they do that the U. S. census underrated the population, the adoption of those results would do the city great injustice by giving it a higher death-rate than actually exists, and yet unless this is done, it will be impossible to compare the statistics of one city with those of others, which is one of the objects of a national census. In our miscellaneous department we publish the census of the police by wards.

## THE FATHERS OF MEDICINE.

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During the coming year the JOURNAL will publish among the advertising pages a series of twenty-four engravings illustrating the epochs of medicine. They will consist mostly of portraits of the "fathers of medicine," from the collection of Dr. J. H. Hunt, a member of the editorial committee, who will contribute the biographical sketches.

Those of Hippocrates and Galen will appear in the present number, and will be followed by Vessalius, Ambrose Pare, Fabricius, Harvey, Jenner, Hunter and others.

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## OBITUARY.

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### DR. SIDNEY ALLAN FOX.

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Dr. Sidney Allan Fox died of pneumonia on the morning of the 10th inst., at his residence, 22 Cambridge Place, aged 34 years, 6 months and 26 days.

Dr. Fox was born at Mount Sterling, Ky. He graduated from the University of Kentucky, and afterward pursued the study of medicine at Bellevue Hospital Medical College, New York City, receiving his diploma from that institution in 1880. He then entered Charity Hospital as interne, remaining one year. Later he served one year in the New York Hospital for Relief of Ruptured and Crippled.

He came to Brooklyn in 1883.

When the Brooklyn Elevated R. R. commenced operations, Dr. Fox was appointed surgeon. This position he held up to the time of his death.

The Brooklyn Throat Dispensary, which was opened October 15, 1888, was one of the results of Dr. Fox's endeavors. He was appointed physician and surgeon-in-chief.

Dr. Fox was present at the International Medical Congress at Berlin last summer. On April 12, 1887, he was married to Mary Coombs, only daughter of Wm. J. Coombs, Congressman elect.

Mrs. Fox had been ill with Typhoid fever several weeks before the doctor was taken sick.

The Effigies of *GALEN* the Prince of *PHYSICIANS*  
NEXT to *HIPPOCRATES*.



*Æ* Quon erat Hippocratem divino è semine Divion  
Orbem numeribus conciliare sibi:  
Scripta sed involvit tam multo anigmate, verum  
Ut quantis soler nullus habere queat;  
Pergamei auxilio nisi sint momenta Galeni,  
Qui doctâ ambages sustulit Arte senis;  
Ergo macte esto virtute, avca res solvctus,  
Que nulli fuerant nota, Galene, prius;  
Obstringensque orbem æterni tibi movere totum,  
Æternis sacras te quoque temporibus.

BON. GRÆ. *Parif. Medic.*

GALEN.

The name of Galen is probably better known in connection with medicine than that of any other man. His influence has been enormous, extending paramount over a period of at least fifteen hundred years.

He was a man endowed with excellent parts, and, having the advantage of the best education, became not only an eminent physician, but also a great philosopher, and was particularly happy in a facility of expression and an unaffected eloquence; but the style of his works is extremely diffuse, his sentences are somewhat perplexing and sometimes absolutely obscure.

He is said to have written over five hundred books upon medicine alone, and about half that number upon other sciences. He even composed two books containing a catalogue of his works and the proper order of reading them.

He wrote fully upon anatomy, and while it is certain that he dissected many of the lower animals, his descriptions make it exceedingly doubtful if he ever dissected the human subject.

The "Ars Medicæ" was for many centuries the text-book upon which the students of Sabinum and other schools of the middle ages were examined before receiving permission to practice.

Hippocrates wrote with the terseness of a philosopher; Galen, with the flowing redundancy of the rhetorician, allowing nothing to remain unsaid, and adorning his discourse with criticism, biography, anecdote, sarcasm, vainglorious boasting, personal narrative, and incidental allusions of every sort. — (Watson.)

Galen's greatest innovation was the introduction of the indications afforded by the pulse; and his chapters, or rather treatises, upon the pulse are wonderful examples of perverse ingenuity. He gives many long tables of the various kinds of pulse. His table of the variations as regards fullness enumerates twenty-seven varieties.



## PROCEEDINGS OF SOCIETIES.

### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society rooms, 356 Bridge Street, on Tuesday evening, November 18, 1890, at 8 o'clock.

There were about 100 members present, Dr. Walter B. Chase in the chair.

The minutes of the previous meeting were read and approved.

The Council reported favorably upon the following applicants, and recommended that they be elected to membership :

Drs. Henry Schilling, N. Y. U., 1890; John O. T. Hill, L. I. C. H., 1886; J. Barney Low, Georgetown, 1881; Chas. G. Purdy, N. Y. U., 1888.

The following applications for membership were presented :

Dr. J. C. Rappold, Jr., 750 Flushing Avenue, U. C. N. Y., 1890; proposed by Dr. Wm. C. Schirmer; Francis Schlitz.

Dr. George D. Holstein, 340 Lafayette Avenue, U. N. Y., 1882; proposed by Dr. E. J. Chapin Minard; Dr. D. Myerle.

Dr. William A. Griffith, 669 Willoughby Avenue, L. I. C. H., 1889; proposed by Walter B. Chase; Geo. W. Brush.

Dr. Paul H. Fairchild, Hancock Street, Bellevue; proposed by Dr. F. D. Bailey; Dr. W. B. Chase.

Dr. Joseph Wheeler Smith, 1208 Herkimer Street, L. I. C. H., 1886; proposed by Dr. R. L. Dickinson; Dr. Charles Jewett.

Dr. Calvin F. Barber, 36 Lafayette Avenue, Coll. P. and S., 1882; proposed by Dr. Wm. Browning; Dr. Thos. L. Wells.

Dr. Lester C. Baldwin, 1153 Gates Avenue, U. C. N. Y., 1879; proposed by Dr. Walter B. Chase; Dr. Frank Baldwin.

Dr. C. F. Perry, Union Street; proposed by Dr. Geo. R. Fowler; Dr. G. H. Evans.

The Secretary presented a letter from Dr. Hayden Nichols, requesting, under Sec. 3, of Chap. 14 of the By-Laws, that a ballot be taken by the members present upon the election to membership of Dr. M. J. Leland.

Dr. Burge moved that the communication be referred to the Council for investigation and decision. Seconded by Dr. Fowler.

As such action necessitated the temporary suspension of the By-Laws, a vote was taken, and the By-Laws were duly suspended.

The motion to refer to Council was then put and carried.

The following, having been duly proposed and favorably reported upon by Council, were declared elected to membership:

Drs. William C. Braislin, Clarence W. Sheldon, Martin Amador, H. Messenger Ayres, Wilbur L. Rickard, Arthur E. Smylie, Sidney Herbert Gardiner, Frank E. Boyden.

#### SCIENTIFIC BUSINESS.

*Report of the Surgical Committee:* The first paper of this Committee was by the Chairman, Dr. H. W. Rand, entitled "The Question of Early Operation in Disease of the Vermiform Appendix." Dr. Rand being unable to attend, the paper was read by Dr. West, with the proviso on Dr. Rand's part that he have the liberty of replying to the members discussing the paper, after the publication of the discussion in the JOURNAL.

The discussion was opened by Dr. Gilfillan and continued by Drs. Fowler, Van Cott and Hutchinson.

The second paper, entitled "Remarks on Cancer," by Dr. W. H. Bates, was read, and discussed by Drs. Shirwell, Otterson, Eccles and Van Cott.

The third paper, entitled "Notes on Modern Methods of Closing Wounds and Controlling Bleeding Vessels," was read by Dr. Alex. J. C. Skene. The lateness of the hour precluded a free discussion of this paper, and after some discussion as to making it the subject of a special meeting or the first order of business for the next meeting, on motion of Dr. Brush it was

*Resolved,* That any member desiring to discuss Dr. Skene's paper might have the opportunity of doing so by presenting his remarks in writing to the editor of the BROOKLYN MEDICAL JOURNAL without delay, at the same time sending a duplicate of his discussion to Dr. Skene, in order that he may reply thereto if he so desires.

The President announced that the Red Cross Society desired to inform the Society that they would furnish district nurses free of charge in any case where the patient desired a nurse and was unable to pay for one.

#### NEW BUSINESS.

The following Obituary Committees were appointed:

*On the death of Dr. Lloyd:* Dr. G. N. Ferris, Dr. P. L. Schenck, Dr. H. Bulwinkle.

*On the death of Dr. Gregory:* Dr. Geo. Wackerhagen, Dr. A. Ross Matheson, Dr. H. H. Morton.

The President stated that the Council had decided to give the



Annual Reception to the members prior to the December meeting, and that due notice would be given of the same.

On motion, the meeting adjourned.

W. M. HUTCHINSON,  
*Secretary.*

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### HARLEM MEDICAL ASSOCIATION.

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The second regular meeting of the Harlem Medical Association, session 1890-'91, was held November 5, at 5 West 125th Street. The President, Dr. E. FRIDENBERG, in the chair; Dr. A. H. LEARY, Secretary. About thirty members were present.

Dr. TRUAX presented a patient, chiefly to show what could be done in the pleural cavity and yet the patient survive—a male, thirty-one years old, who, two years ago, was shot through the chest. The ball entered the left nipple and made its exit a little above the apex of the scapula. He soon recovered and went to work. Several months after he had pleurisy with effusion, and was admitted to the German Hospital, where he was aspirated, and discharged apparently cured.

A few months later he entered Bellevue Hospital, when it was learned he had empyemia, and an incision was made beneath the lower angle of the scapula. About four weeks ago the patient presented himself to Dr. Truax at the Harlem Hospital, and an abscess was diagnosed within the chest. The incision in the back was reopened and an inch and a half of rib resected. The wall of the abscess could be distinctly felt with the finger in every direction. The cavity held sixteen ounces of water. A drainage-tube was inserted in the lowest point, and the case terminated rapidly. The percussion note is good over the whole posterior portion of the lung.

Dr. MANLEY called attention to the supernumerary nipples the patient presented. He had recently seen a case where milk was secreted in glands situated such as these.

Dr. FRIDENBERG inquired if there was any sinking in of the ribs.

Dr. TRUAX.—Very little.

Dr. EDWARD FRIDENBERG presented a case of

#### INCIPIENT LOCOMOTOR ATAXIA WITH MARKED OCULAR MANIFESTATIONS.

Minna F., a dressmaker, aged forty-six, complains of blurred vision and headache while sewing. Her "pin-head" pupils suggesting the possibility of spinal disease, prolonged questioning resulted in the following

*History.*—Patient (of a healthy family, previously in excellent health and free from symptoms or signs of disease) experienced a severe fright

about three years ago. On the following morning she found herself suffering with double sight, lasting two or three weeks. Since this fright she is troubled with attacks of pain in the region of the stomach, running backward toward the spine, always accompanied by nausea, occasionally by vomiting. The attacks recurred at intervals of three to four weeks, bore no relation to the menstrual periods, and lasted about eight hours. Patient constantly feels tired. She has occasional pains in the knees, which she attributes to prolonged sewing at the machine. Of late sewing causes blurring of sight and frontal headache. Bowels somewhat constipated; urination normal; menstrual periods irregular since some time.

*Examination of Eyes :*

V. O. D.  $\frac{20}{40} + 1.25$  D. sph.  $\frac{20}{30}$ .

V. O. S.  $\frac{20}{50} + 1.25$  D. sph.  $\frac{20}{40}$ .

In both eyes Motility normal. Visual field (for white) normal. Marked green-red blindness. Marked myosis; pupils barely the size of a pin's head. Reflex iridoplegia; pupils do not react to light either directly or consensually, but grow smaller during accommodation or convergence. The ophthalmoscope reveals commencing atrophy of both optic nerves, well defined, whitish disks and blood-vessels of normal calibre. There is absolutely no ataxia either of lower or upper extremities; no anæsthesia or paralysis, but the patellar reflexes are absent.

We have evidently to deal with a case of locomotor ataxia, arising acutely after a severe mental shock. Its first symptom, paralysis of an ocular nerve; then general lassitude, gastric crises; after some years myosis, reflex iridoplegia, optic nerve atrophy and absence of patellar reflex. The absence of ataxia does not invalidate the diagnosis. Early eye-symptoms usually mean late ataxia, and *vice versa*.

Dr. DANIELS.—The diagnosis is not proven. Peripheral neuritis would account for all the symptoms. You must prove disease of the spinal column.

Dr. FRIDENBERG.—A number of the symptoms are undoubtedly due to pathological changes in the peripheral nerves. These changes are exactly similar to those found in the posterior columns, and affect peripheral nerves and brain centres as well as the spinal column.

Dr. FRIDENBERG presented a patient with

PARALYSIS OF THE SUPERIOR OBLIQUE MUSCLE OF THE LEFT EYE.

The paralysis was of specific origin. The case was utilized to demonstrate the analysis of double images, and the following table was

recommended as a simple yet exhaustive scheme of diplopia due to paralysis of isolated ocular muscles :

		PARALYSIS OF	
Diplopia..	Lateral ...	Right-sided. ....	{ Homonymous = Right externus. Crossed = Left internus.
		Left-sided. ....	{ Homonymous = Left externus. Crossed = Right internus.
	Vertical ...	Upward .....	{ Homonymous = Inferior oblique. Crossed = Superior rectus of eye, whose image is highest.
		Downward .....	{ Homonymous = Superior oblique. Crossed = Inferior rectus of eye, whose image is lowest.

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### KINGS COUNTY MEDICAL ASSOCIATION.

This Association will hold its next meeting on the second Tuesday of January at Wurzler's Building, 315 Washington Street, at 8.30 P. M. The paper of the evening will be by Dr. Louis F. Criado, entitled Galvanic and Faradic Electricity, and their Uses in Gynæcology.

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## PROGRESS IN MEDICINE.

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### SURGERY.

BY GEO. RYERSON FOWLER, M. D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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#### IODOFORM GAUZE DRAINAGE OF THE PERITONEAL CAVITY.

Van Stockum (*Nederl. tijdschr. v. Verlosk en Gyn.*; *Centralblatt f. Chir.*, No. 35). S. in this communication furnishes a contribution to the subject of the treatment of dead spaces in the peritoneal cavity following laparotomy, as well as the prevention of adhesions. His researches follow those of Mikulicz, Terrillon, Fritsch, Lande and others. The material for these studies was obtained from the gynæcological clinic of Prof. Treub, in Leyden, and these are supplemented by a series of experiments upon rabbits. The method of Treub differs from that of Mikulicz and Fritsch, who allow the tampon of gauze to remain for from seven to eight days, thereafter replacing with a still smaller one, or substituting for it a drainage tube. Treub, on the contrary, permits the gauze drains to remain only from thirty-six to

forty hours, and then dispenses with their use entirely. This method possesses the great advantage of avoiding the formation of adhesions, with its consequences. While the tampons remain in the cavity of the peritonæum adhesions form around the same, whereby it is quickly walled off from the former. In this manner the intestinal loops form adhesions with each other, with the parietal peritonæum, and with the abdominal walls.

In order to come to a definite conclusion regarding the causes of the formation of peritoneal adhesions, S. performed two series of experiments upon rabbits. In the first of these he followed the course pursued by Dembowski, namely, that of rough manipulation of the peritoneal surfaces, brushing these vigorously with a coarse tooth-brush, until there appeared sufficient lesions to produce points of hæmorrhage. No drainage was used in these cases. In the second series laparotomy with temporary gauze drainage was done. In the first series the animals were killed at the end of ten days and no adhesions were found. From this the conclusion is drawn that the manipulation of the intestinal loops during a laparotomy is not the cause of the adhesions which subsequently occur. In the second series the abdomen was opened in the linea alba, and a portion of the parietal peritonæum excised, and the wound closed with carbolized silk or catgut, and a simple collodion dressing applied. From observations made in this series of experiments, six in number, S. was led to the conclusion that ligatures and sutures almost always, and wounded surfaces rarely, are the cause of peritoneal adhesions. In order to study the influence of iodoform gauze tampons when placed in the peritoneal cavity for purposes of drainage, S. placed a strip of this material between loops of the intestinal tube and the abdominal wall, leading the end of the same through the wound in the latter, outward. This was removed after between two and three days, and the animal was killed a week later. By means of these experiments S. learned that as soon as the tampons were introduced adhesions commenced to form, the surrounding intestinal coils becoming thereby immobilized. The cavity in which the tampon lies remains, however, in communication with the rest of the abdominal cavity, thereby rendering drainage of the entire peritoneal cavity possible. This communication persists for at least five days; should the tampon be removed during this time, the cavity from which it is removed should be treated as the open peritoneal cavity. After recovery, no adhesions result from the tampons. Should the tampons remain in situ for a longer time, they become encapsulated; in the removal the encapsulating structures are easily torn, and extensive adhesions are now the result. The method of Mikulicz, therefore, offers two disadvantages, namely, the formation

of adhesions and the occurrence of intestinal paralysis through the fixation of the intestinal tube. S. is of the opinion that these may be avoided by the employment of the temporary tamponade or gauze drains of Treub. Should the drains or tampons be removed after a shorter time, say two days, the peritoneal cavity is found to be almost entirely dry, and there remains a wound surface, which is now dusted over lightly with iodoform, and from which a very slight amount of secretion occurs. Unlike other wound surfaces, the arrest of secretion upon this surface is not to be looked upon as an evidence of danger; the great ability which the peritonæum possesses of resorbing secretions is here to be taken into account. In those cases, however, in which purulent surfaces are left, as for instance, after removal of suppurating ovarian cysts, permanent drainage is most urgently indicated.

Owing to the fact that some disturbance of the parts becomes necessary during the removal of the gauze, S. does not recommend its use in cases where resection of the intestine has been done.

#### THE PATHOLOGICAL ANATOMY AND OPERATIVE TREATMENT OF CONGENITAL TORTICOLLIS.

J. Vollert, Vienna (Centralblatt f. Chirurgie, No. 38, 1890). The author calls attention to the pathological changes observed in the muscular tissue of the affected sterno-mastoid muscle in congenital torticollis. His observations are based upon the examination of specimens removed by the late Prof. v. Volkmann, of Halle, from three cases of this deformity. The operation of Volkmann (open longitudinal incision at the most prominent portion of the contracted muscle) permits of a most thorough investigation of the condition of the muscle. In all three cases the peculiar whitish-blue, shining and reflecting appearance of the muscle which caused it to resemble tendon, was observed, and this portion was excised by a transverse division of the muscular structure. At v. Volkmann's request, V. made careful microscopical examination of the portions of muscle thus excised, with the result of corroborating v. Volkmann's previously-made assertion that in some of these cases, at least, no changes in the muscular structure would be found. In our specimen such was found to be the case, but in the other two, although some muscular fibres were found to exist, yet they were not in a normal condition, being atrophied and isolated. Between the muscular fibres was found loose but moderately solid connective tissue, which gave the impression of having restricted the growth of the muscular substance by its own active proliferation, and was itself disposed to favor a retrogressive metamorphosis. In the sections in which these changes were the most pronounced, there was no difficulty in discriminating between these

and the characteristic appearance of true tendonous structure, as for instance the tendon Achilles.

The author proposes for these cases the name of fibrous myositis.

#### A NEW OSTEO-PLASTIC METHOD OF RESECTION OF THE FOOT.

Prof. Obaliński, Krakon. O. describes a new method of gaining access to the bones of the tarsus as follows: The operator, facing the plantar surface of the foot to be operated upon, grasps the latter with the left hand in such a manner as to separate the two outer from the three inner toes, while an assistant grasps the remaining toes and forcibly draws them to one side. A medium-sized amputation-knife is then entered in the space between the two groups of retracted toes, and is carried, with considerable force, between the metatarsal bones, and then between the cuboid on the one side and the external cuneiform and scaphoid on the other, until the anterior surface of the astragalus and os calcis is reached. The two halves of the foot are now retracted laterally, the cut surfaces forming a right angle with each other, when easy access is obtained to the individual bones of this portion of the foot.

In joint tuberculosis the disease is rarely confined to a single bone, and unless thoroughness can be practised in operations upon diseased bones in this region, affected portions will serve as nuclei for fresh invasion of tissue. Furthermore, unless some such formal procedure as that of O. is adopted, foci of the disease in adjacent bone tissue may be overlooked.

After thorough removal of all diseased parts, the two halves of the foot are restored and sutured in position by strong silk, the foot preserving its natural shape.

#### UPON HYDROCELE OF THE ROUND LIGAMENT.

Wechselmann (*Archiv f. klin. Chirurgie*, Bd. xl., p. 578). The author discusses those cystic tumors, containing serous fluid, rich in albumen, which are observed in the inguinal region of the female and which resemble the hydrocele of the male. Such collections of fluid may occur in the diverticulum of Nuck or at the vaginal process of the peritonæum, and under such circumstances in all probability have their origin in some irritation or traumatism in the neighborhood. In by far the greater proportion of cases, however, the condition is really a hydrocele of the round ligament, and has its origin during either pregnancy or the lying-in state. The diagnosis of the closed variety of the affection, as well as that which communicates with the peritoneal cavity, is easily established. Their discrimination from abscess, hernia, and cysts of Bartholini's glands

is not, as a rule, difficult. On the contrary, the diagnosis of a suppurating hydrocele of the round ligament from an incarcerated hernia may be impossible, without invasion. The treatment consists of extirpation; puncture and injection may be dangerous in the communicating variety, and simple incision involves a prolonged and tedious convalescence.

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## OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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### EXTRA-UTERINE PREGNANCY.

Matlakowski (*Arch. f. Gyn.*, B. xxxviii., H. 3). Tait declares the destruction of the fœtus in ectopic gestation is unjustifiable. There is time enough after the rupture for the surgeon to step in, he thinks. Werth looks upon the ectopic ovum as a foreign body that should be removed. The latter authority contrary to Tait holds that the sac should be removed with the fœtus. This however may be impracticable in a broad-ligament pregnancy on account of the danger of hæmorrhage. A less experienced operator would do better to undertake the extirpation of the fœtal sac in the early months of gestation. In such cases hæmorrhage should be prevented by preliminary suture of the broad ligament between the uterus and the fruit sac and also beneath the tumor.

Werth has published statistics of 53 cases operated within six years, after the death of the fœtus. In 40 cases the sac was adherent to the abdominal wall or was made so by suture. The mortality in these cases was 14, or 35 per cent. In 11 cases in which the sac was removed the mortality was 36 per cent. In 2 cases the attempt to separate the sac was unsuccessful. Both died. It is impossible to lay down fixed rules for the treatment of this class of cases. The choice of procedure must depend on the anatomical relations in the individual case. When the sac is adherent to the abdominal wall, or can be made so, the simplest method is evacuation and drainage. A part of the sac may also be removed as practised by Martin, the edge of the remaining portion being stitched to the edges of the abdominal wound.

### THE ANATOMY OF LABOR.

Barbour (*Br. Med. Jour.*, Nov. 1, 1890). This paper presents the recent results of the author's study of the anatomy and phenomena of

labor by means of frozen sections, with lithographic illustrations. The study is based on sections made in four different cases one in the eighth month of pregnancy, the others in the first, second and third stages of labor respectively. The value of the sections is enhanced by the fact that in every case the death was due to causes independent of the labor.

The antero-posterior diameters in the four pelves (in inches) were as follows:

	1st.	2d.	3d.	4th.
Brim.....	$4\frac{1}{8}$	$3\frac{3}{4}$	$4\frac{1}{8}$	$4\frac{3}{8}$
Cavity.....	$4\frac{3}{4}$	$4\frac{3}{4}$	$4\frac{7}{8}$	$4\frac{3}{4}$
Outlet (to end of sacrum)...	4	$4\frac{3}{4}$	$4\frac{1}{2}$	$4\frac{1}{2}$

The first and third may be regarded as normal pelves, the second was slightly contracted, the fourth elongated antero-posteriorly.

The sections show to what extent the diameters are shortened by the soft parts during labor. The actual shortening of the antero-posterior diameters at the brim is one-half inch, in the cavity three-quarters inch, at the outlet seven-eighths inch. The oblique diameters at the brim are reduced nearly an inch.

The bladder whether distended or empty is entirely in the pelvic cavity till the first stage of labor is well established. It accommodates itself to the pressure of the gravid uterus mainly by expanding transversely. It does not rise into the abdomen until after the beginning of the second stage and then only in part, the vesical neck still remaining low in the pelvis. The lower portion, within the pelvis, is compressed by the head during the birth. The usual position of the bladder is immediately regained on the completion of labor.

The utero-rectal and utero-vesical folds of peritonæum are also lifted during the second stage and returned again to their former positions at the close of labor. The uterine muscle becomes differentiated during labor into an active, shortening, thickening portion and a passive, lengthening, thinning portion with a distinct line of demarcation between the two, the retraction ring. The retraction which takes place during a pain remains to a great extent permanent after the pain passes off. The muscular structures of the upper uterine segment therefore become progressively shorter and thicker as the labor goes on. As soon as the contents of the uterus have passed below the retraction ring no expulsive force can be exerted upon them by the walls of the birth-canal. The further expulsion is accomplished wholly by the muscular action of the abdominal walls.

The walls of the genital canal are everywhere in contact during the whole course of labor and after its close, except for the contents. This fact is significant as bearing upon the exclusion of septic air.



Observations upon the moulding of the head as revealed in the sections show, that the parietals do not overlap, as commonly assumed, during the labor. They may easily do so after birth, but the reduction of the transverse diameters during the birth is accomplished by the moulding of the head as a whole.

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## PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital; Physician to the Department of the Chest, Brooklyn City Dispensary.

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### LOBAR PNEUMONIA.

Playfair (Edin. Med. Jour., Nov., 1890) analyzes a series of thirty cases of lobar pneumonia occurring in children. Fourteen of these cases were males and sixteen were females. From the table given we find the average age to be six years. The youngest patient was eighteen months. The oldest patient was thirteen years. Three of the cases were ten, twelve and thirteen respectively. The others were all under ten. There were only two cases under two years of age. The pneumonia was in the right lung in sixteen cases; in eleven cases the disease was in the left lung; three were cases of double pneumonia. In twenty-one cases the seat of the disease was at the base, while in eight cases the apex was involved. In this connection the author gives his own opinion and also quotes various authorities to the effect that *simple position has very little to do with recovery from pneumonia in children. He would expect as good a result from an apical pneumonia as from a basic.* Two cases, in which there was complete consolidation of one lung, died. In eleven cases nervous manifestations were noted. These were delirium, headache, and herpes labialis. Thirteen of the cases had had attacks of measles and whooping-cough. The duration of the disease, on an average, was fifteen days. Crises, well marked, were present in twenty-one cases, the disease subsiding in this way on the fifth or sixth day. The time of year that the various cases occurred was found to be as follows: Seven came in the winter, ten in the spring, eleven in the summer, two in the autumn. The complications were those conditions which result from involvement of the nervous system. The author considers that the high fever has an intimate connection with the sensitive nervous system of the child. Disturbances in the cerebral and spinal centres aid in producing the fever. Bronchitis was found in five cases. Its occur-

rence as a complication is therefore noted. Gastric and intestinal irritation may be prodromata or may accompany the disease. Vomiting and purging ushered in some of the cases. When such irritation came late the crisis was usually delayed. The author refers to individual cases where the physical signs were late in showing themselves. The symptoms of pneumonia may be present without signs for three or four days. These signs, although late in developing, disappeared early and rapidly. In the treatment of the cases hot moist applications were not employed. The author does not believe in their efficacy. He has found them to be uncomfortable, to increase the fever, and to prevent free expansion of the lungs. Mild counter-irritation may be employed. Syrup of tolu and syrup of chloral were used to control excessive coughing. Stimulation was freely used. Antipyrin and antifebrin in a few cases were given. Temperature was usually controlled by tepid sponging. This was used every two hours when the temperature rose to  $103.5^{\circ}$ , and would produce a satisfactory reduction.

#### SALIPYRIN.

This is a drug, the composition of which is 57.7 parts of antipyrin and 42.3 parts of salicylic acid. This forms a compound which is only slightly soluble in water but very freely soluble in alcohol. The principal effects noted from its use are two: The reduction of arterial tension and the lowering of the temperature. Fifteen grains may be given hourly for five doses. This will produce well-marked perspiration. The temperature will be reduced in from two to four hours and will be kept down for nearly four hours. It may be used in rheumatic fever, and has been of value in the treatment of puerperal fever. Great relief has been obtained from it in sciatica. An occasional urticarious rash sometimes appears during its administration. This, however, is of short duration.

#### GLYCERIN SUPPOSITORIES.

Polubruiski (*Deutsche med. Zeit.*) advises that glycerin suppositories are useful under the following conditions:

1. Constipation due to hardened feces in the rectum.
2. Intestinal impaction in large intestines.
3. Pressure on the rectum from tumors.
4. To prevent straining at stool.
5. In children.
6. To hasten and increase ordinary evacuations.

A mere local irritation is the probable cause of the action.

#### ALBUMINURIA AND LIFE ASSURANCE.

Saundby (Birmingham, England,) teaches that albuminuria may exist in a healthy person for a long period, and that it, in itself, should

not be regarded as an absolute contraindication to life assurance. There must, however, be nothing abnormal but the albuminuria and an entire absence of a family, direct or collateral, history of Bright's; no acute nephritis, past or present; no cardiac hypertrophy; no hard pulse; no retinal changes: age not over forty; no œdema under the eyes; no cirrhosis; urea normal in amount. Such cases may be considered as safe risks, in the author's opinion.

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## PREVENTIVE MEDICINE.

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BY E. H. BARTLEY, M.D.,

Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, Long Island College Hospital.

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### PREVENTION OF SCARLET FEVER.

In a paper read before the American Pædiatric Society, and published in the "Archives of Pædiatrics," December, 1890, p. 921, Dr. J. Lewis Smith calls attention to the chief means of preventing the spread of the contagion of scarlet fever. He calls attention to the fact that as the area of contagiousness of this disease extends but a few feet from the patient, isolation is very effective—more effective than with measles and pertussis. But this small area of contagiousness of scarlet fever is more than overbalanced by the tenacity with which the poison adheres to clothing and apartments. He cites examples of how the disease may be carried upon clothes of physicians, nurses, washerwomen and school children, by books, toys, letters, etc. He then takes up the question of after-disinfection, and shows that the usual method by burning sulphur is inefficient. He believes that to prevent the spread of scarlet fever, as well as of diphtheria, we must not depend upon the after-disinfection, but should employ disinfection throughout the whole course of the disease, both in the room and upon the patient. He recommends for the disinfection of the room the following mixture, to be evaporated in a basin with water:

℞	Acid Carbol.,	-	-	-	-	-
	Ol. Eucalypti,	-	-	-	-	aa ʒ i.
	Spts. Terebenth,	-	-	-	-	ʒ vi.

M.

SIG.—ʒ i. added to a quart of water and kept simmering on the stove.

At the same time he employs inunctions over the entire surface, every three hours, with the following :

R	Acid Carbol.,	-	-	-	-	-
	Ol. Eucalypti,	-	-	-	-	aa ʒ i.
	Ol. Olivæ,	-	-	-	-	ʒ vi.

M.

He also recommends washing the mouth and fauces frequently with a two-grain-to-the-pint solution of corrosive sublimate. He advises, in addition, constant ventilation of the room by an open window. The cautious physician in attending scarlet fever will always bear in mind the possibility that his person or clothing may become infected, and be the means of carrying the poison to other children, and he will not go directly from such a patient to a child with another sickness, or a midwifery case, without first washing his hands, hair and face in an antiseptic solution, and changing his outer apparel. He is of the opinion that although the means employed by health boards for domiciliary disinfection are inadequate, it is the duty of attending physicians to see that they are carried out, and to suggest such other means as his judgment may deem proper.

#### THE PREVENTION OF DIPHTHERIA.

In a paper upon this subject, read before the American Pædiatric Society and published in the Archives of Pædiatrics, Dr. Caillé discusses this disease as it occurs in tenement houses, and the means of isolation and disinfection as practised in New York City, etc. Under the head of personal prophylaxis, he urges the importance of a daily toilet of the naso-pharynx by means of a mild antiseptic wash. He quotes the experience of Dr. Hance, at the Nursery and Child's Hospital in New York, with this method of preventing the spread of this disease, which seems to be a strong recommendation of this very rational procedure.

The author closes with the following *résumé* :

1. In the present state of our knowledge, the possibility of preventing diphtheritic sepsis cannot be denied.
2. As one of the means of securing this end, the daily inspection of school children is necessary.
3. The municipal control of diphtheria in large cities is inadequate, and methods of personal prophylaxis are more apt to prevent infection.
4. A daily prolonged toilet of the naso-pharynx by means of weak antiseptic solutions is a trustworthy method of prevention in the absence of filthy carious teeth and enlarged and inflamed tonsils.

5. The naso-pharyngeal toilet is indicated for all those who are exposed to diphtheritic infection, and also as a routine treatment in every case of chronic naso pharyngeal catarrh, pertussis, scarlatina and measles.

6. It is, in my opinion, the duty of authorities and the medical practitioners to act in accordance with the above views.

#### CONTAGIOUSNESS OF DIPHTHERIA.

As there are physicians who even to-day deny that diphtheria is contagious, the following statistics, taken from the last Annual Report of Dr. C. V. Chapin, Superintendent of Health, of Providence, R. I., may be of interest to such :

No. of families in which there was more than one child, - - -	121
“ these in which there was more than one case, - - -	47
“ children in all the above families, - - - -	472
“ these children attacked, - - - - -	231
“ additional families in the same house, - - - -	38
“ children in these families, - - - - -	95
“ these additional families attacked, - - - - -	7
“ children in these families attacked, - - - - -	11
“ tenements which were fumigated, - - - - -	57
“ cases where, after fumigation, the disease spread to other families in the house, - - - - -	1
“ children who were removed as soon as the disease made its appearance, - - - - -	26
“ children attacked on their return, - - - - -	0

This table indicates that diphtheria is a disease of about the same degree of contagiousness as is scarlet fever. About one-half of those under fifteen years of age who are exposed directly to it are attacked, and it exhibits about the same tendency as scarlet fever to extend to other families in the same house. The need of precautionary measures during convalescence is not necessary for so long a time as in scarlet fever. Investigation showed that, apparently, one attack gave no immunity against another subsequent attack ; for, of fifty-one persons who had had the disease and who were exposed, twenty-five contracted the disease a second time. In most cases the first case that occurred in a family was more severe than those which followed.—(*Abstract from Sanitary Inspector, Aug., 1890.*)

#### INOCULATION AS A MEANS OF MITIGATING THE SEVERITY OF MEASLES.

Dr. Hugh Thompson advocates the inoculation of children with the virus of measles, in the “Glasgow Med. Jour.,” June, 1890. He

records thirteen experiments made upon young children. He concludes that while the inoculation with blood is objectionable, it is more certain than the use of serum from a blister when the efflorescence is abundant. He claims that by implanting the virus in a part well suited for its development, and that a non-vital part, we create a local disease which spoils the blood of persons so inoculated, so that it becomes an unsuitable cultivating medium for the organisms, and if the disease be contracted, it is mild in character. He recommends that these inoculations be practised on all young children; and advises that it be done in the months of September and October next following the birth.

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## PATHOLOGY.

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BY JOSHUA M. VAN COTT, JR., M.D.,

Pathologist and Lecturer on Histology and Pathological Anatomy, Long Island College Hospital; Associate Director of the Department of Histology and Pathology, Hoagland Laboratory; Pathologist to the Brooklyn Throat and Nose Hospital.

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### TABULATED FINDINGS IN FIVE HUNDRED URINALYSES.

Mr. J. B. Thomas, Jr. (Hoagland Laboratory, Department of Histology and Pathology, November, 1890), tabulated five hundred analyses of urine from all sources, including the Long Island College Hospital, made in the department of pathology, with the following results (see table appended):

*A.*—Of the total number of cases, over three-quarters are acid, thirteen per cent. only being alkaline, and three per cent. not recorded. This is of interest in showing that most urines are available for microscopic examination when freshly passed, and draws attention to the fact that casts are dissolved in alkaline urine. Jaksch<sup>1</sup> recommends adding to the urine a little chloroform in order to prevent decomposition.

This is, of course, all-important, as the whole question of diagnosis may hang on the presence or absence of casts.

*B. Albumen*—It will be seen that twenty-three and six-tenths per cent. of the cases contained albumen, and that less than six per cent. of them contained it in marked quantity; while about eighteen per cent. contained it in traces.

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<sup>1</sup> Jaksch: Klinische Diagnostik, 1889, p. 221:

    B Chloroformi..... c.cm. 5-7.5   Aquæ destil..... l. 1

    M. Sig.—c.cm. 20-30 to be added to the urine to prevent fermentation.

TABULATED FINDINGS IN FIVE HUNDRED URINALYSES.—J. B. THOMAS, JR.

		A. REACTION.	B. ALBUMEN.	C. STGAR.	D. DEPOSIT.	E. CRYSTALS.	F. LEUCOCYTES.	G. EPITHELIUM.	H. CASTS.	J. SUNDRIES.
Acid.....	339	+ 29	+ 9	+ 980	Triple phosphates.....	84	+ 91	177	All kinds.....	16
Alkaline.....	65	- 89	- 7	- 166	Uric acid.....	51	- 311	44	Hyaline.....	123
Neutral.....	27	0	0	92	Uric acid.....	35		33	Ancient epithelial.....	181
Not recorded.....	15		*	32	Amorphous urates.....	33			Nucleated.....	12
					Amorphous urates.....	23			Hyaline only.....	46
					Amorphous phosphates.....	55			Granular.....	29
					Calcium sulphate.....	3			Hyaline & granular only.....	83
Totals.....	500	118	16	500		344	405	274		383
										139
										3.2
										36.9
										24.6
										6.2
										9.2
										0.6
										5.8
										16.6
										6.6
Totals.....	100.0	23.6	3.2	93.6			81.0	54.8		27.8
<i>Percentages.</i>										
Average.....	1018.3				With low specific gravity.....	48	9.6 %			
1 10 or under.....	51				With high specific gravity.....	70	14.0 %			
1028 or over.....	94				With albuminuria.....	49	9.8 %			

Explanation of Signs.

+ = Quantity marked. - = Quantity slight.  
 0 = None. \* = Not recorded.

Specific Gravity.

Cast.

Explanation of Signs.

This has a twofold significance: first, that, as will be seen below, there are enough cases in which pus was found in considerable amount to more than account for the presence of albumen in traces; second, because, as will also appear below, there are enough cases in which casts are found to more than outnumber all the cases of albuminuria, and far more than those in which albuminuria is marked in quantity. This goes to show that casts do not necessarily accompany albumen, and *vice versa*.

*C. Diabetes.*—Sugar is present in a little over three per cent. of the cases, and of these more than half were pronounced.

*D. Deposit.*—Over eighty-nine per cent. nearly of the recorded cases contained deposit of some sort or other. Of these fifty-six per cent. were marked, thirty-three per cent. slight. This deposit must be formed of either extraneous dirt, precipitation of crystals or histological elements from the genito-urinary tract. The table shows that the great preponderance of deposits is formed of crystals and morphological elements.

*E. Crystals.*—Of these there are more than enough to account for the thirteen per cent. of alkaline cases. This is explained by the fact that the decomposition of urine and its conversion from an acid to an alkaline fluid begins generally at the bottom of the vessel; so that triple phosphates will occasionally appear in a deposit where the great bulk of urine is really acid, only the lower stratum being alkaline. Something over ten per cent. of the cases reveal oxaluria.

*F. Leucocytes.*—These are far the most prevalent of the morphological elements; and of the eighty-one per cent. of cases showing their presence, eighteen per cent. show them to be present in marked quantity.

This corresponds very closely with the percentage of triple phosphates and squamous epithelium; and cystitis of rather marked intensity may be inferred in this number.

*G. Epithelium.*—More than fifty per cent. of all cases show epithelial cells to be present—free. Nearly nine per cent. come from the kidney, over ten per cent. are definitely stated as coming from the bladder.

*H. Casts.*—It is significant that more than one-quarter (27.8 per cent.) of all specimens contain casts. This is significant in its relation to the percentage of albuminuria, for about twenty-four per cent. of the cases contain albumen, and of these scarcely six per cent. are marked, while the remaining eighteen per cent. of slight albuminuria are accounted for by the more than eighteen per cent. of cases containing considerable pus: demonstrating clearly that casts are frequently present with no albumen at all.



Six per cent. of all cases show simply hyaline casts; the remainder show cast material composed of the morphological elements of the renal parenchyma in varying stages and kinds of degeneration.

Forty-nine cases of casts *with* albuminuria are noted. Of these twenty-nine may be directly accounted for, in the table, with marked albuminuria, while the others may be classed with those containing pus in marked quantity.

Nearly ten per cent. of cases show casts in conjunction with low specific gravity, and it is an instructive fact that while the actual number of these cases is forty-eight, the total number of cases in which the specific gravity is very low is fifty-one.

The conclusion here would seem to be that with the morphological evidence of degeneration of the renal parenchyma, as evidenced by the presence of cast material, comes the further evidence of marked disturbance of the eliminative function of the kidneys. This, indeed, must be so; for if the form elements upon which an organ depends for its functional activity be impaired, it is a self-evident proposition that the functional activity itself must be modified.<sup>2</sup>

In this connection it is further to be noted that recent observations go to prove the presence, in many specimens of nephritic urine, of pepsin, which dissolves the cast material they contain by the process of digestion. Sehrwald<sup>3</sup> remarks upon this point that the digestion of cast material may occur even in the renal tubules. This is quite sufficient to account for the three cases of low specific gravity without casts.

It will be further seen that nearly twenty per cent. of the cases have a very high specific gravity, and of these fourteen per cent. contain casts. Of the remaining six per cent. something over three per cent. are diabetic, while the rest are probably due to true uric-acid diathesis. The *rationale* of the high specific gravity with casts would at first seem difficult; for it has already been observed that casts are generally evidence of destruction of the functional elements of the renal tissue—only the hyaline casts being possible without such parenchymatous degeneration—and with this destruction must come modified function, namely, lessened urea elimination.

The apparent fallacy here is due to another set of factors playing an important role in the ætiology of renal disease, namely, the heart and lungs. Indeed, renal stasis<sup>4</sup> is very common, and depends for the most part upon some obstruction of the general circulation, as a result of cardiac lesion, either valvular or myocardial, or some pulmonary

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<sup>2</sup> Ibid., p. 227. Rosenstein: Die Nierenkrankheiten, p. 45 et seq.

<sup>3</sup> Sehrwald: Deutsche med. Wochenschrift, 1890, No. 24.

<sup>4</sup> Jaksch, Rosenstein, Strumpell, Delafield and Prudden.

affection which has embarrassed the right heart primarily: so that the water elimination and the elimination of the salts of the urine may be greatly altered in their relative proportion through disturbance of the cardio-vascular mechanism, and a urine may be of a relatively high or low specific gravity because of an accelerated or obstructed flow of blood.

This lends very valuable aid to diagnosis; for if a given sample of urine with high specific gravity be found to contain no sugar, but, on the contrary, the daily quantity is diminished and casts are present, the heart and lungs should be at once suspected, as some form of lesion of one or both is almost certain.

Passive renal hyperæmia means two things: First, cardiac insufficiency, either primary or as a result of pulmonary disease; second, sooner or later a structural change must occur in the kidneys, which will eventually give rise to symptoms of impaired renal function.

The very important revelation made by this tabulation, of the fact that the presence of casts is not at all proportioned to that of albuminuria, and that the relation of casts to specific gravity is much more definite, while not new, nevertheless emphasizes the necessity for thorough microscopical examination of all urine, and, further, the quantitative estimation of urea whenever casts are present with either high or low specific gravity.

This is of fundamental importance as a means of determining, not only the existence of renal disease, but also the probable nature and extent of it, as well as the presence or absence of cardiac or pulmonary complications. On this point the best observers are unanimous.

But there would seem to be another potent reason for careful microscopical examination of urine, and, where casts are found, for quantitative estimation of urea.

It is of the utmost importance, from a prognostic standpoint, that the diagnosis of renal disease should be made at the earliest possible moment, for the arrest of pathological processes in the kidney is much more difficult as they are more chronic; and certainly the positive inclusion or exclusion of nephritis of any type is essential to the proper conception and treatment of lesions of other organs.

Finally, inasmuch as the kidneys are the great gateways for the elimination of by far the major portion of the true products of retrograde metamorphosis of the body tissues, it is not very surprising that these organs should be so frequently the seat of disease. Indeed, it would seem that with all the hard usage they get from imprudent eating, and the disturbance of blood supply from reflex neuroses due to the very prevalent over-activity of the great cerebro-spinal centres in this age of

hurry and keen competition, it would really seem that the kidneys ought to show an even greater ratio of disease.

The prime teaching of this tabulation we believe to be that the mere examination of urine for sugar and the presence or absence of albumen is not at all adequate to determine the presence or absence of renal disease. It is the imperative business of every practitioner of medicine to subject all cases where the least suspicion of renal complication exists to a most rigid microscopical examination, and, where cast material is present, to a thorough estimate of urea, that the daily function of the kidneys may be accurately determined.

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## OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

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### MYOPIA.

At the annual meeting of the Ophthalmological Section of the British Medical Association, held in July, 1890 (*Am. Jour. of Ophthal.*, Oct., 1890), an interesting discussion of the causes, prevention and treatment of myopia was arranged, the subject being opened by Priestley Smith and Richardson Cross. The former concluded that myopia is always a defect, often a disease. It is entirely incurable, but largely preventable. Its progress can be, and often is, accelerated by improper use of the eyes, and retarded by judicious interference. In the discussion that followed these papers all were agreed that great evil resulted from improper ocular hygiene in the schools and during the period of bodily growth, and emphasized the importance of individual effort in popular instruction on this subject, as well as conjoined action on the part of the societies through the State boards. An hereditary tendency to myopia seemed undoubted, and by care in the individual cases now an improvement in future generations might be hoped for. Myopic parents should be especially careful of their myopic children. The selection of glasses was fully discussed, and the advisability of full correction in patients with good accommodation, the same glass being used for near and distance, was generally though not unanimously maintained. While there were minor differences of opinion as to the value of prisms, etc., all were practically agreed as to the value of correcting an existing astigmatism, and that myopia, even of moderate degree, should be regarded with suspicion in young people.

## PYOKTANIN.

Alt (Am. Jour. of Ophthal., Oct., 1890) reports his results with Merck's methyl violet, used as Stilling has suggested in crayon or solutions of from 1-1000 to 1-2000. In corneal ulcers it proved itself on the whole less efficacious than other remedies, though the patients invariably "felt better" after its use. In acute and subacute purulent otitis media it was very satisfactory, discharge being favorably modified or controlled and granulations or even large polypoid formations influenced. It was also beneficial in furuncle of the external auditory meatus. Alt failed to find the staining of the iris and contents of the anterior chamber described by Stilling. He concludes from his own experience that pyoktanin is no better than bichloride of mercury, perhaps not so good, and that it is a somewhat disagreeable thing to handle on account of the staining. It is probably as good as bichloride after operations, and decidedly better for sutures.

[Numerous adverse opinions have appeared in the foreign journals, and my own experience has not given me much encouragement in its use.—L.]

## KERATITIS PUNCTATA OR DESCIMITIS.

Lawford (Roy. Lond. Oph. Hosp. Rep., 1889, Part IV.) gives the different views held as to the nature of keratitis punctata, whether it is an independent disease of Descemet's membrane, or simply a secondary manifestation of inflammation elsewhere. From the examination of various specimens, he is convinced that those authors are right who believe the cellular collections to be due to emigrated cells rather than to proliferation of the endothelium of Descemet's membrane. Some participation in the process is certainly taken by this endothelium, however, as at the affected points the cells lose their sharp outline and appear swollen, but these changes are secondary. It would otherwise be difficult to explain the usual wedge shape of the corneal deposits, and then, too, similar deposits are sometimes found on the lens capsule. While the emigration of cells undoubtedly comes from the uveal tract, it is not yet possible to say from what portion, whether the iris, ciliary body or choroid. In those cases in which the iris appears quite normal the microscope might show some involvement.

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 GYNÆCOLOGY.
 

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BY WALTER B. CHASE, M.D.

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THE DIAGNOSIS AND TREATMENT OF CERTAIN ABDOMINAL DISEASES, PRINCIPALLY CHARACTERIZED BY SYMPTOMS OF PERITONITIS.

Dr. Horace T. Hanks (N. Y. Medical Journal, October 18, 1890). Under the head of treatment he says: Where the surgical indications

had not become clear he would treat a case characterized by symptoms of peritonitis with saline cathartics, sufficient codeia to give comfort (opium was objected to, as being constipating), the ice-coil where fever was high, and leeches; perhaps enemata might have to take the place of salines. These cases should constantly be watched, since the abdominal surgeon might have to be called at any time.

#### SURGERY OR ELECTRICITY IN GYNÆCOLOGY?

The November (1890) issue, "*Annals of Gynæcology and Pæd.*," contains a very spirited article on the above topic by Dr. Anna M. Fullerton, physician-in-charge of Woman's Hospital, Philadelphia, in which with great vigor the writer espouses the surgical side of the question. Recent surgery, with its marvelous advances in abdominal and pelvic work, has shown the evils of the claim of the value and safety of electricity—

"First. By bringing to light conditions undreamed of hitherto, by physician or surgeon, proving that masses in the pelvis may mean one of twenty or more pathological conditions—salpingitis, ovaritis, salpingo-ovaritis, abscess of tube or ovary, hydrosalpinx, hæmatosalpinx, extra-uterine pregnancy, small dermoids, etc.—some of which conditions are absolutely hopeless as to cure save by the knife.

"Second. By challenging the electrician to show by what occult powers he can determine the exact character, mixed, multiple or simple, of the condition which exists in any given case; or the propriety of directing his current upon it.

"Third. By proving clinically and by post-mortem specimens, facts observed at the operating table, yielding incontrovertible evidence of the dangerous character of electrical procedures in gynæcology."

The difficulties of diagnosis of intra-abdominal and pelvic disease are dwelt upon and the necessity of exploratory incision enforced.

Quotations showing errors in diagnosis of some very noted gynæcologists are given, and the dangers of traumatic peritonitis from electricity are mentioned, combating the "dangers and uncertainties of abdominal section." The author quotes the brilliant results of Dr. Price's 117 cases of abdominal section, "performed in the slums and alleys of Philadelphia," with but a single death, and contrasts it with Dr. Bradford's report of Dr. Massey's work in dispensary clinic, figures of which were not given, closing with conclusions, a result of several years' work in the Philadelphia Woman's Hospital, after observation of many cases:

"First. That temporary conditions of acute pelvic inflammation, due to non-septic causes, are quick, as a rule, to respond to the ordinary palliative measure, for allaying inflammation, such as the use of

salines, rest in bed, etc. That if properly treated they are apt to get well without leaving any permanent lesion behind them.

"Second. That for the treatment of pelvic disease the use of electricity, even in skilled hands, has proved uncertain in its results, and is fraught with possibilities so dangerous as to preclude its use as a therapeutic agent in the manner at present advocated.

"Third. That when the history of a case and careful and intelligent examination prove a pelvic malady to be of long standing, and a source of persistent ill health, it is poor practice to waste time in prolonged palliative treatment when an exploratory incision can clear up the obscurity and prepare the way, at least, for intelligent management.

"Fourth. That in acute cases, where masses are found in the pelvis, and the accompanying history and symptoms point to the probability of the existence of conditions which delay may render dangerous, there should be early and prompt resort to operation.

"Fifth. That for the attainment of satisfactory results from such operations, the skilled workman is required. . . .

"Sixth. That all gynæcologists should not consider it their duty to attempt this work, which constitutes a distinct and comprehensive branch of surgical science.

"Seventh. That all physicians should be more thoroughly trained to appreciate the existence of conditions demanding the care of a specialist, and should be more disinterested in referring such early to the proper sources for help."

As regards method, asepsis is preferred to antisepsis.

#### THE DIAGNOSIS OF ECTOPIC PREGNANCY.

The "N. Y. Medical Journal," October 18, 1890, gives remarks of Dr. Baldy, of Philadelphia, before the American Gynæcological Society. The following symptoms are strongly suggestive of ectopic pregnancy :

1. A spurious flow, simulating menstruation, first lighter and then darker than normal menstrual discharge, containing clots and shreds.
2. Pain—intermittent, cramp-like, increasing in severity—low down in the pelvis, which may be sufficient to occasion collapse.
3. The discharge of shreds of decidua without or with clots.
4. The general signs of pregnancy.
5. . . .
6. Vaginal discoloration, as in normal pregnancy.
7. The cervix was sometimes enlarged and os patulous.
8. The fundus was enlarged, and crowded forward or backward.
9. The uterine appendages sometimes showed a cyst on one side, and, though it pulsated, was not positively diagnostic of uterus, and appendages sometimes showed a cyst on one side.

10. The patient's belief as to pregnancy should be taken into account.

11. Some cases show elevation of temperature and accelerated pulse.

12. At the period of rupture, great pain and collapse.

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## DISEASES OF THE SKIN.

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BY SAMUEL SHERWELL, M.D.,

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### ON THE NATURE AND TREATMENT OF ECZEMA.

Unna, Hamburg (British Jour. Dermatology, Aug., 1890). Under this heading, in a long and able article, Unna expresses his belief that many if not most eczemas are parasitic in origin and nature, and naturally from these premises advocates treatment, and that long continued, by parasiticidal measures. This paper was read in the Dermatological Section of the British Med. Society, July, 1890, and was vigorously opposed by most of those who took part in its discussion. Unna is always vigorous and interesting, however one may differ with him as to theory or practice.

### IMMIGRANT DERMATOSES.

Prof. Jas. C. White, Harvard (Journal of Cutaneous and Genito-Urinary Diseases, Oct., 1890). This paper was read by the author at the last meeting of the American Dermatological Association, Sept., 1890, and in it a series of very important and interesting observations are given as regarding diseases of the skin prevalent, with and imported by the poorer classes of Europe, etc., seeking these shores. He classifies his remarks under the following headings, viz.:

(1) Direct effects of the voyage.

(2) New impressions, *i. e.*, the new physical and psychical impressions they suffer from, to which they had before never been exposed, as for instance of physical; mosquito poisonings, intense heat, etc.

(3) Imported affections, as scabies, favus lupus, leprosy, etc.

### CONTRIBUTIONS TO THE STUDY OF DRUG ERUPTIONS.

T. Colcott Fox, London, Eng. (British Journal Dermatology, Nov., 1890). A good though rather esoteric article. He quotes largely from

American writers on the same subject, as White, Morrow, Van Harlingen, etc., and while not neglecting reference to the older, commoner and better known eruptions from these influences, refers most to those caused by internal or external medication, etc., and dwells particularly on those of the various new drugs so recently come into pharmaceutical use, as those of the synthetically built-up remedies. Also refers to those caused by the almost universal practice in these days of anti-septic surgery and antiseptics of wounds.

#### BEHREND'S DIVISION OF DRUG RASHES INTO SPECIFIC AND DYNAMIC GROUPS.

H. G. Brooke, Manchester, Eng. (British Jour. Derm., Oct., 1890). Both this and preceding paper were read in the Section at the last International Medical Congress, and the same criticism will apply to both, that though full of interest to those engaged in looking up these matters, they are food for the illuminati chiefly.

#### THE TINEAS—DESCRIPTION AND TREATMENT.

M. Quinquaud, Paris (Gazette des Hôpitaux, Sept., 18-25, Oct., 2-9, 1890). Under the above dates in the journal given, a good résumé will be found of the diagnosis, prognosis and treatment of the various vegetable parasitic disorders. The chapters on treatment will be found specially interesting as embodying in a general way the French methods.

#### NOTES ON PILOCARPINE IN DERMATOLOGY.

Hermann G. Klotz, New York (Jour. of Cut. and Genito-Urin. Diseases, Nov., 1890). The author in this paper, read at the last meeting of American Dermatological Association, gives a valuable *résumé* of the literature of this drug, mentions those who have recommended its use, and the various diseases for which it has been used dermatologically, and finally give cases of his own, in which it seems to have been exhibited with good effect.

In concluding his paper he says: "In the light of the more recent theories of the physiology of the sweat secretion (referring by this to Unna's assertion that the usually received opinion that perspiration is due to functional activity of the sudatory glands alone is wrong; and that, on the contrary, the exuded liquid is the result of many more factors, and a very complex subject.—S. S.) the use of pilocarpine in pachydermatous and xerodermatous conditions and diseases of the skin is strongly indicated, and deserves to be subjected to renewed trials; but recommends small dosage and long continuance, as has been, as he states, already recommended by Pick.



## PROSTITUTION AND ABOLITIONISMUS.

"Letters of B. Tarnowsky," published by Leopold Voss, Hamburg, 1890. Von Turkheim, of Hamburg, gives in the "Monatshft.," Vol. XI., No. 9, p. 399, a somewhat detailed review of this (to sociologists and others) interesting book. It has naturally a special interest to dermatologists and syphilographers. He, Dr. T., is very pronounced in his views of the obligatory localization and official control and regulation of this evil; and while conceiving this regulation to be consistent with all humanitarian, moral and religious convictions, believes it also to be of the highest importance to the physical well being of the community.

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**BACTERIOLOGY.**

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BY B. MEADE BOLTON, M. D.,

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**OZONE AS A DISINFECTANT.**

Ozone gas is by no means as valuable a disinfectant as has been claimed for it. Hermann Sonntag (*Zeitschrift f. Hygiene*, Bd. 8, p. 95, 1890) has put it to the test on cultures of various micro-organisms, and finds that its germicidal power is comparatively weak. Indeed, it only begins to act at all when there are 13.53 mgrms. of it to a litre of air, which is equivalent to 63 per cent. by volume. Even with this amount the action is very uncertain. It is certain, therefore, that the amount ordinarily found in the air—1 mgrm. to 100 cubic meters of air (Davy, *Compt. Rend.*, t. lxxxii., p. 900)—or even the small amount generated in a room by evaporating turpentine, ether, water, etc., can certainly have no effect whatever.

In a few cases apparently favorable results have been obtained by different experimenters; but, as Sonntag abundantly shows, the methods employed in every case permitted the presence of other substances, especially chlorine gas. This, of course, vitiates the results. Sonntag's experiments were conducted with every precaution and with the best bacteriological and chemical appliances. Tests were made with the pus staphylococci, anthrax spores, blood from an animal which had died of anthrax (and hence containing no spores), and with the bacilli of mouse septicæmia. Cultures of these micro-organisms were subjected to the action of ozone under various circumstances. In some cases cultures were dried on silk threads, according to Koch's method, and in others they were mixed with finely sifted dust. In some experi-

ments they were dry, in others moist. The gas was made from purified oxygen by means of a Werner Siemens apparatus (Poggendorff's *Annalen*, Bd. 102, p. 120). The ozone was first passed through U tubes, containing pumice-stone saturated with sulphuric acid and set in a cooling mixture of ice and salt. The amount of the gas was carefully estimated for every experiment. In some cases the gas was allowed to remain acting on the cultures for twenty-four hours in sealed tubes; in other cases the ozone was passed through for twenty minutes on four successive days. In short, the tests were very complete.

Sonntag's experiments with aqueous solutions of ozone gave more favorable results, but he used the Lender's ready prepared ozone water. This water probably contains other gases which act upon micro-organisms; so Sonntag does not regard these results as conclusive.

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## MEDICAL JURISPRUDENCE.

### LEGAL QUALIFICATIONS FOR THE PRACTICE OF MEDICINE.

BY SIDNEY V. LOWELL.

The Supreme Court of the State of Vermont has lately been petitioned by a lady, named Mary J. Townshend, for a writ of mandamus directing the Censors of the Vermont State Eclectic Medical Society to issue to her a certificate authorizing her to practise medicine within that State.

The statutes of Vermont provide, as do the laws of other States, that every medical society chartered by the Legislature "shall issue certificates to physicians and surgeons who furnish evidence by diploma from a medical college, or university, or by certificate of examination by an authorized board, which satisfies them that the person presenting such credentials has been, after due examination, deemed qualified to practise the branches mentioned in the diploma or certificate."

The petitioner based her application on a diploma issued by the "Vermont Medical College." That institution was organized under the general laws of the State authorizing the formation of corporations to "establish and maintain literary and scientific institutions."

The petitioner claimed that the practice of medicine was a science; that to grant diplomas was an ordinary power going with all educational institutions of a high order; that having such diploma, she was entitled to be licensed by the Medical Society.

The Court, in its opinion, takes the broad ground that the granting of "degrees," either of M. D., LL. D., D. D. or A. B. is a matter apart

and beyond the powers of any institution unless it has been specially conferred by the State. The Court say that it was not intended to allow the State to be flooded "with doctors of medicine, doctors of law, doctors of divinity, masters of arts, civil engineers and all the other various titles that everywhere in the civilized world have signified high attainments and special equipment for professional work;" that to so hold "is to liken it to the witty French minister, who threatened to create so many dukes that it would be no honor to be one, and a burning disgrace not to be one."

On the reasoning of this case—which is likely to be respected everywhere, being a unanimous decision of the full bench of a State whose judicature is highly esteemed—it is improbable that licenses to practise medicine will ever be required to be issued unless on diplomas issued by colleges expressly authorized so to do, and not under any "implied" authority as a graduating certificate.

It will be noticed that the applicant was a woman. A woman physician once sadly admitted to the writer that the particular form of practice which she carried out was sought for by women who had not the requisite attainments to obtain a degree in the general practice. Her remark made a deep impression on me at the time, to the effect that there should be no slight and easy door to the practice of medicine under any guise whatever. It is to be feared, however, that any legislation necessary, as in the case I have cited from Vermont, would be as easily attainable as many other equally objectionable things have been. The action of the Legislature of Massachusetts in recent years, in giving the name and powers of a college to an institution far below the grade of the existing colleges, was a discouraging sign in a State of which better things might have been hoped for. Still, vigilance may do much.



## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.*

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. Lewis Smith, M.D. Seventh edition, thoroughly revised, with 51 illustrations. O, c., pp. 900.

This treatise on children's diseases is so well known that it seems almost a work of supererogation to call attention to it. We should under ordinary circumstances feel that we had done our full duty in simply mentioning it. But the seventh edition is not a reprint of those which have preceded it. It is in all

essentials a new book, so thorough has been the revision. Indeed, to reprint in 1890 what was published in 1886, the date of the sixth edition, would have been an imposition, so many and so important are the advances made since that time. We find among the new matter introduced into the present edition. Conjunctivitis, Icterus, Sepsis, Umbilical Diseases. Hæmatemesis, Melæna, Sclerema, Œdema, Pemphigus, Epilepsy, Tetany, Appendicitis, Typhlitis, Perityphlitis, and a most admirable paper on Intubation by Dr. Joseph O'Dwyer. Important matter has also been added relating to the etiology and treatment of the diseases discussed in former editions. This book is, without doubt, the best in the English language treating of the diseases of children.

A **DICTIONARY OF PRACTICAL MEDICINE** BY VARIOUS WRITERS. Edited by James Kingston Fowler, M.A., M.D.; Fellow of the Royal College of Physicians, etc. O, c., pp. 942. Philadelphia: P. Blakiston Son & Co., 1890.

This work is the result of an attempt to present in a somewhat concise form an account of the more important subjects comprised under the head of Practical Medicine, including also the Diseases Peculiar to Women. Among the forty-two contributors to the volume we notice many well-known names: E. M. Crookshank, Professor of Bacteriology at King's College; T. C. Fox, Physician for Diseases of the Skin, Westminster Hospital; Victor Horsley and J. Bland Sutton are perhaps the best known to Americans. One prominent feature of the book appears under the head of Treatment, which concludes each article, with the statement of the exact doses and combinations of the various drugs recommended. This will commend it to young practitioners, and to those whose materia medica is somewhat rusty.

A **MANUAL OF AUSCULTATION AND PERCUSSION**: Embracing the Physical Diagnosis of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M.D., LL.D. Fifth edition; thoroughly revised by J. C. Wilson, M.D. Illustrated with woodcuts. D, c., pp. 268. Philadelphia: Lea, Brothers & Co., 1890.

It is, perhaps, not too much to say that this Manual of the late Professor Flint has held a leading position among the manuals of auscultation and percussion ever since the first edition appeared many years ago. Prof. Flint was, as all who knew him will testify, a man wonderfully gifted in diagnostic powers, and equally so in his ability to impart to others the knowledge which he possessed. He was eminently a teacher, both when he spoke from his college chair and when he put his pen to paper, and in these respects was only equalled, but not surpassed, by Watson and Dalton. Other authors have given us more voluminous manuals than this of Flint, but for the student we have never seen one which was in all respects better adapted to his wants.

## MISCELLANEOUS.

### SCIENTIFIC STUDY OF INEBRIETY.

The American Association for the Study and Cure of Inebriety, has arranged to hold a series of monthly meetings, in the hall of the New York Academy of Medicine, for the medical study of Alcohol and Opium Inebriety. Special phases of this subject will be discussed each evening in papers by leading authorities, followed by remarks and reports. At the first meeting, December 10th, "The Relation of Life Insurance to Alcohol and Opium Inebriety," was presented. The following papers will be read during the coming year:

January 14, 1891—"Alcohol: Its physiological and pathological action, and its use and abuse in medicine," will be discussed. "Inebriety, its Etiology and History," will be the topic for February 18th. "The Curability of Inebriety, its treatment and relation to other diseases," will be the subject for March 18th. In April, "The Medico-Legal Relations of Inebriety" will be studied.

It is the purpose of this Association to confine these discussions entirely to the medical and scientific side, with the view of reaching some general conclusions from which more accurate researches can be made.

A cordial invitation is extended to all medical and scientific students to be present and join in this special study of the "Drink Disease and its Problems."

### BROOKLYN'S POLICE CENSUS OF 1890.

<i>Ward.</i>	<i>Pop.</i>	<i>Ward.</i>	<i>Pop.</i>
1 .....	22,178	15 .....	28,128
2 .....	8,524	16 .....	46,823
3 .....	19,590	17 .....	44,021
4 .....	13,303	18 .....	82,072
5 .....	18,981	19 .....	38,201
6 .....	40,558	20 .....	25,476
7 .....	38,758	21 .....	53,239
8 .....	34,608	22 .....	53,171
9 .....	20,007	23 .....	31,177
10 .....	36,097	24 .....	17,967
11 .....	22,935	25 .....	48,301
12 .....	28,041	26 .....	30,358
13 .....	23,172		
14 .....	28,260	<b>Total</b> .....	<b>853,945</b>

As examples of the style of the writings of Hippocrates, we append his description of what is called the *FACIES HIPPOCRATICA*, or the dying face :

“A sharp nose, hollow eyes, collapsed temples ; the ears cold, contracted, and their lobes turned out ; the skin about the forehead being rough, distended and parched ; the color of the whole face being green, black, livid or lead-colored.”

The Hippocratic Oath, or indenture between the preceptor and his pupil, is another fair illustration of his style :

“I swear by Apollo the physician, and Æsculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgement, I will keep this oath and this stipulation—to reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required ; to look upon his offspring in the same footing as my own brothers, and to teach them this art if they shall wish to learn it, without fear or stipulation ; and that by precept, lecture, and every mode of instruction, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others.

“I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from what is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel and in like manner, I will not give to any woman a pessary to produce abortion. With purity and with holiness I will pass my life and practise my art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption ; and further, from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice, or not in connection with it, I see or hear in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men in all times ! But should I trespass and violate this oath, may the reverse be my lot.<sup>1</sup>

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<sup>1</sup> From the *Genuine Works of Hippocrates*, translated by Francis Adams, LL.D., Vol. II., p. 779.





ÆSCULAPIUS.

Æsculapius (Russell, "Hist. and Heroes of Med.," pp. 6,7,8,9.) is probably as much of a fiction of the Greek imagination as Jupiter, Neptune, or Hercules. But we have no doubt but that the Spartan belief that they were the lineal descendants of Hercules exerted a powerful influence upon the events of Greece and the history of the world; so too the legendary direct descent of Hippocrates from Æsculapius, and through him medicine from this demigod had not only a vast influence upon the estimation in which the art of medicine and its practitioners were held among the Greeks, but the influence is more or less felt by the profession of the world to this day."

Pindar third Pythian Ode tells us Æsculapius was the son of the nymph Coronis and Apollo; how both mother and child had very nearly been sacrificed to the vengeance of the gods, and how Apollo snatched the infant from the funeral pile and carried it off to a remote and secure cave, the retreat of Chiron, the justest of all the centaurs, that he might learn to cure the manifold diseases that afflict mortals.

"So he rescued those who sought his abode, some from sores of spontaneous origin, some from wounds inflicted by the gleaming brass, or the far-hurled stone, some whose frames were wasted by the summer's fire or the winter's cold.

The gentle charm gave relief to some; to others he administered the soothing potion, or round their limbs he bound the plaster made from herbs; while others again he restored to health by cutting off the limb."

But he carried his skill too far and had the imprudence to restore a dead man to life, for which he was punished by one of the gods.

He was the patron god of the Æsclepiadæ, or priest-physicians, to which order Hippocrates belonged.

Æsculapius was worshiped with great solemnity in various parts not only of Greece but the European world; even in England, where, during the occupation of the Romans, altars were erected to him, one of which at least is now in existence, found in the Roman camp at the Lave, South Shields.

Even our Valentinus Marcellus, "Travels in Europe and the East," pp. 284-285) made the renowned Valley of Æsculapius of Epidaurus the Mecca of his pilgrimage in Greece, and in that great amphitheatre which he estimated would once accommodate 30,000 people, he again held an anatomical and surgical museum, after a lapse of more than 2,000 years, by sacrificing one of the tutelary emblems of Æsculapius in the shape of a chanticleer of glossy black plumage.

His method of making the sacrifice was characteristic of the man, and you will possibly pardon this digression while I tell you that after a suitable exorcism setting forth the solemnity and sacredness of the place, tied the common carotid of one side of the fowl's neck, and finding that the subject still survived, he tied the opposite carotid, and as the victim still failed to expire *sec. art.*, he divided the spinal marrow. He concluded his remarks to the pupils present at this Græco-chirurgical clinique by saying that this was the *recusatus* time he had tied the common carotid—uncertain times on the living human subject in his own country.



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*ORIGINAL ARTICLES.*

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OLD AND NEW WAYS IN THE AFTER-TREATMENT OF  
LAPAROTOMY.

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BY ALEX. J. C. SKENE, M.D.

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Read at the meeting of the Brooklyn Gynecological Society, May 2, 1890.

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From recent reports in the literature of medicine it appears that a new departure has been taken in the after-treatment of cases of ovariectomy and similar operations. In place of giving opium and keeping the bowels at rest for several days, the bowels are moved early and opium is withheld. Cases which show signs of septicæmia or peritonitis are given saline cathartics. It is claimed that free action of the bowels effects a kind of drainage which arrests the tendency to inflammation of the peritonæum and also favors the elimination of septic material. This appears rational on theoretical grounds, especially in view of the fact that in well-marked septicæmia there is frequently a spontaneous serous diarrhœa, which occasionally is followed by a lowering of the temperature for a time. It is seldom, however, that permanent improvement occurs after that kind of elimination by purgation. Whatever theories or facts may be advanced in favor of this plan of treatment, one would gladly accept it, or any other which might prove better than the old ways of managing such cases. But I have failed to see that this new treatment has many advantages.

So far as I can learn, the results on the whole do not compare well with those of other surgeons who give opium and let the bowels rest, and the stomach also, until the first dangers are past. Furthermore I have found in my own practice that as soon as there are evidences of peritonitis or sepsis the stomach is disturbed and will not retain saline cathartics, or anything else, for that matter. To state this in another way: as soon as the indications for cathartics appear it is impossible to have the patient retain them, in the great majority of cases.

Perhaps the advocates of this treatment may be able to anticipate the coming storm, and by giving salines ward it off; but I have never been able to do so. More facts gathered from a larger experience may change my views. At least one thing is sure: the subject is worthy of a free discussion in this Society.

Regarding the use of opium, or rather the discarding of it, in the after-treatment of laparotomy cases I am still more conservative. While there are a number of reasons why it should be used, I have not yet heard of any good reason why it should not be.

That there are patients who do not need opium and others to whom it does not agree, must be admitted; but the majority require it to relieve pain, produce sleep and, above all, rest and quiet, which are so very necessary to recovery after major operations. These effects of opium, it may be claimed, simply contribute to the comfort of the patient, but do not secure safety or aid in recovery. Granting that such may be the case, the humane surgeon will find in this good reason for the use of opium; but I am confident that opium has a therapeutic value in addition to that of relieving suffering.

The danger from shock which arises from major operations is, I am sure, controlled by opium better than any other drug. So also is the depression from anæmia resulting from hæmorrhage. All careful observers have noticed that the rapid, feeble pulse has become fuller, slower and steadier under the influence of opium. The anxious, pinched face also changes to a better expression. This has led me to look upon opium as the most reliable of all heart tonics in the depression which follows these operations. When the organic nervous system is tottering under the oppression of severe injuries to the abdominal and pelvic viscera, opium is the greatest sustaining agent. Alcohol, no doubt, will bridge over a moment of extreme and immediate danger, but its effects must almost always be supplemented with opium in order to obtain a continuous sustaining effect.

Perhaps more important still is the question which I specially desire to raise in this connection: Does opium have the power of preventing peritonitis and septicæmia or controlling their fatal tendencies? To judge fairly of the therapeutic effects of opium in surgery, it

is necessary to keep in mind the fact that after an operation there are injured or damaged tissues left that must be repaired. These tissues may or may not be affected with septic material, but in either case the safety of the patient depends upon these wounded tissues being speedily closed in by reparative material, which restores continuity of tissue and at the same time protects the normal surrounding tissue from inflammation and the patient from general septicæmia. Now this process, by which the general system is protected from the dangerous effects of local injuries, requires time—less time than is required to restore the injured tissue or heal the wounds; but it is the most important time, because upon completion of this protection depends the safety of the patient to a great extent. Wounds may do badly, but if an exudation has been thrown around them which protects from septicæmia, recovery may be expected. Of course, the modern surgeon protects his cases from sepsis by his cleanly operating; but in spite of his best efforts there may be trouble occasionally, and then the great point is to gain time for this natural protective process which comes, or should come, first in the order of restoration. The principal condition necessary to secure the protective factor in the general process of repair is repose or quietude of the nervous and circulatory systems, and opium is the most potential agent in effecting this condition. The process of repair is arrested when the nervous system is in turmoil and the circulation is running wild, and opium should be used to give the necessary rest. It is a fatal mistake to wait until there is evidence of inflammation or septicæmia. It should be given to control the nervous excitation which generally precedes these complications. Opium fails to do all that it is capable of doing if it is not given in time, and it is condemned as useless when the fault lies in the mode of using it.

The time to give it, then, is an important question. Some of the most successful surgeons give it immediately after the operation, and that is best when the case is bad and there is shock. In easy cases I prefer to wait until the ether effects pass off to some extent and there is distress or pain present; then it is time to begin it, and the effect should be kept up until there is no danger of complications, so far as the condition of the patient indicates.

The way of giving it is of some importance, no doubt. I prefer to give it at first hypodermically, and keep up the effect in that way, or by rectal instillations of opium and warm water.

Having advocated the use of opium and objected to the use of purgatives early in the treatment of this class of surgical cases, the question which follows is, When shall the opium be withdrawn, and cathartics resorted to? Opium should be gradually given up as the

constitutional and local evidences of trouble subside, and then the cathartics or laxatives should be given. To state this in another way: opium should only be given when there are indications for its use, and it should be given up as soon as the indications subside. The bowels should rest until the time for peritonitis is past, or if there has been inflammation or sepsis, when the acute symptoms and signs of these have subsided.

By way of supporting the arguments in favor of the plan of treatment advocated, I may add that the surgeons who use opium and let the bowels rest have thus far had the best results, so far as I can learn. Finally, I desire to recall the fact that this method of treatment was first employed in puerperal metritis and peritonitis, and is still practised by obstetricians to a large extent. Now as there is a marked similarity between the inflammatory and septic diseases which occur in the puerperal state and those which occur after ovariectomy, hysterectomy and the like, the experience of obstetricians with both old and new ways of treatment must be of great value in guiding ovariectomists.

This opens up quite a field for discussion, which is the main object I had in view in presenting this fragment of a paper. And while I have strongly favored the older therapeutics, I am quite ready to change in case the discussion should show that the new ways have advantages.

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## A CASE OF EXCISION OF LUPUS OF THE FACE, WITH IMMEDIATE SKIN TRANSPLANTATION.<sup>1</sup>

BY GEO. RYERSON FOWLER, M D.,

Surgeon to the Methodist Episcopal Hospital and to St. Mary's Hospital, Brooklyn, N. Y.

Mrs. O'B, aged 65, was kindly referred to me by Dr. Sidney Allen Fox, of this city, with a well-marked lupus exedens of the nose. The entire integument of the nose, with the exception of a small point at its tip, was involved in the disease, the ulceration extending upon the cheeks, and to the inner canthus of the left eye as well. Beyond the area of ulceration there were several suspicious tubercles. The patient states that the disease began many years ago with what seemed like a small pimple upon the left side of the nose, which, after several years, began to ulcerate. This ulceration progressed slowly, new tubercles making their appearance in the immediate area of the surrounding integument, which in their turn would undergo the ulcerative process. The super-

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<sup>1</sup> Case presented at the meeting of the Brooklyn Surgical Society, Oct. 16, 1890.

facial surface involved at the time of coming under my observation measured 5 cm. in a vertical direction by 7.5 cm. transversely.

On April 14, 1890, at St. Mary's Hospital, the following operation was performed under ether: The entire diseased surface was circumscribed by an incision extending through the thickness of the skin to the subcutaneous cellular tissue. This was made to include all suspicious tuberculous tissue. By the use of the scalpel and curette the structures thus marked out were thoroughly removed, stopping short only of periosteum and bony structures. By means of hot salt water compresses and firm pressure the hæmorrhage was arrested, but one ligature being required. The patient's left arm in the deltoid region was then disinfected, and Thiersch's method of skin grafting followed, the strips of skin being immediately transferred to the surface upon the nose and face from which the lupus tissue had been removed. The strips were laid side by side, their edges slightly overlapping each other, until the entire surface was well covered in; nine strips were required. The parts were then dressed by being first basket-strapped with narrow strips of oil silk until all the grafts were thus protected. Over this were then laid several thicknesses of gauze wrung out of a sterilized salt solution, the whole being held in place by a moderately firm gauze bandage.

On the third day the dressings were removed and replaced, the oil silk permitting of the lifting away of the gauze compresses without disturbing the transplanted strips. Every strip seemed to have secured a hold, and this was confirmed at subsequent dressings, which were repeated at intervals of two days. The oil silk strapping was found to act most efficiently as a means of maintaining a certain amount of moisture of the transplanted strips, which latter particularly I have found to be quite essential to success in this method of skin-transplantation.

As the case progressed, the edges of the transplanted strips, which had been permitted to overlap the healthy skin in order to allow for shrinkage, were gradually trimmed, care being taken to still leave sufficient of the strip to prevent the formation of cicatricial tissue at the point where these joined the limits of the circumscribed area. In fourteen days the healing was complete, but the patient has been kept under observation until the present time for the purpose of determining the curative effects of the skin transplantation upon the lupus. There has not been the slightest suggestion of a recurrence of the disease.

The method of treatment here pursued is that which was introduced to the profession by Senger, of Krefeld.<sup>2</sup> In order to prevent the

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<sup>2</sup> Berliner klin. Wochenschrift, 1889. No. 33; Brooklyn Medical Journal, April, 1890, p. 257.

recurrence of the disease in those cases in which the gap cannot be closed by suturing, and where heretofore it has been necessary to permit of slow granulation and cicatrization of the parts following excision, S. recommends that skin transplantation by the method of Thiersch be at once practised. He describes a case in which he employed this method with success, the disease having made considerable progress upon the cheek and upper lip.



THE REPORT OF A CASE OF A LARGE INTERSTITIAL FIBROID OF THE UTERUS REMOVED BY ABDOMINAL SECTION, WITH SOME OBSERVATIONS IN RELATION TO THE MOST RATIONAL METHODS OF DEALING WITH NEOPLASTIC FORMATIONS WHICH ORIGINATE IN THE MUSCULAR FIBRE OF THE UTERUS.

BY THOMAS H. MANLEY, M.D.,

Visiting Surgeon to Harlem Hospital, New York.

Since Apostoli promulgated his views, in connection with the therapeutic value of electricity in the treatment of diseases and pathological conditions peculiar to the internal organs of generation, in woman, and especially, of those solid tumors of the uterus, which are fibrous-like in consistence and color, but are histologically identical with non-striped muscle, a furious war of words has raged, between those who are enthusiastic advocates of electricity and those who do not hesitate to relegate it to the almost endless host of fads which are being boldly thrust forward on the profession, by members of all grades and rank.

On one side it has been contended, that it acts with unerring certainty, in neoplastic formations of benign origin; in chronic inflammation, congestion, hæmorrhage, suppuration, and even in neuralgias and other neuropathies of the womb and its appendages.

Its most violent and uncompromising enemies go to the other extreme, and regard its application, under many circumstances, not only useless, but harmful, and claim, that beyond its psychological effect, it accomplishes no good whatever.

Up to the present time the use of electricity has been purely empirical. There certainly has been no want of theories to explain its *modus operandi*; but none of them can be accepted, until it can be demonstrated, in other parts of the body, superficially located, that it

will accomplish, in pathological conditions there, what is claimed for it in the deep recesses of the female pelvis.

However, though we may not be able to explain its mode of action, yet; if it will relieve pain, conduce to bodily comfort, and make life supportable, in that class of female diseases, which have an inherent limit, and by it we may conduct our patient, beyond that line in life when atrophic changes commence, then, indeed, it must be accepted, as a therapeutic adjuvant, of infinite value.

With the case herein recorded this, the electro-therapeutic agent, was faithfully tried.

*History of the Case.*—The patient, Mrs. F., 39 years old; married five years. She said, that in earlier life, she was accustomed to hard work, and in one situation which she held, she was often required to carry heavy weights, which, when ascending a stairs, she would support against her left hip and groin.

Twelve years before, simultaneously she noticed two things which gave her much anxiety. There appeared a small fullness in the left iliac region, accompanied with a dull, intermittent pain, which was aggravated and intensified, at each menstrual epoch. It made a slow but steady march in growth, until at the time, I examined her, when a large growth occupied the abdominal cavity, though, extending mostly into the left side.

She said that for the past five years her general health began to fail and her bodily strength was visibly affected. She had trouble with breathing on slight exertion, and in climbing stairs. Obstinate constipation set in, and the bowels would only move when large injections were administered. She had an irritable bladder, which gave her much suffering, and required her to rise to urinate several times at night. During the past two years her tumor became an active cause of physical discomfort. When she would lie down she could obtain ease in one position only, for a short time, having to turn from side to side, unceasingly. On physical examination, no organic disease could be discovered, though she was greatly reduced in flesh.

She had been under treatment and in the hands of different physicians for many years; and as no two of her medical attendants quite agreed on the nature of her malady, diversity of treatment was the rule. Chronic inflammation of the ovary was the first diagnosis. Shortly after her marriage she was again examined, and told she had a "stray pregnancy"—that the infant was growing outside the uterus. In fact, the whole gamut of pelvic disorders, which might give rise to a localized swelling—and their name is legion—was run through. And, accordingly she was under constitutional treatment, was blistered, bandaged and poulticed at divers times.

But, nevertheless, within the past year, she came under the care of a gentleman who, regarding her growth as a fibroid tumor, tried the direct effects of electricity on it, twice a week for six months.

At first she said she thought it helped her, but in a short time after each *séance* her whole abdomen felt very tender and sore. For some time before she was referred to me, she had given up, in despair all kinds of treatment. Now realizing that something radical must be done, after long and thoughtful consideration, she decided to hazard an operation. From the original seat of the growth on the left side and the position which the intestines took, one would suspect ovarian or parovarian tumor. But a uterine examination and exploratory puncture, decided the probable nature of the enlargement.

Now, then, that we had to deal with what seemed more like a fibroid than anything else, how would we attack it and remove it without putting our patient's life in great danger? If the actual pathological condition and morbid anatomy could be positively determined beforehand in those cases—if a correct diagnosis could be made, not as to the elements of the growth alone, as that sometimes is of small consequence compared with the involvement and implication of other organs—then we might proceed on some definite plan. But no living man can always diagnose those intra-abdominal growths, and I think Tait<sup>1</sup> speaks the full truth when he says "that some of them will defy the most expert pathologist to recognize them, even when removed." Pozzi<sup>2</sup> tells us in his masterly work on gynæcological surgery, that fibroids of the uterus, regardless of their precise anatomical situation, may be treated in general by three methods:

1st. When there is no serious local complication, by electricity.

2d. By the artificial production of the menopause, by double castration or spaying.

3d. By the removal of the neoplasm, through active surgical interference, either through the vaginal passages, as practised by Péan, or through the hypogastric incision—the operator taking with the growth, through the incision, the uterus, tubes or ovaries, as may be required.

My patient would have nothing more to do with electricity, so that castration and excision remained. When the nature and scope of the operation—which had for its purpose removing the ovaries—were explained to her, she was averse to it, and demanded the removal of the growth—uterus and appendages if necessary. It was most providential that she did refuse oöphorectomy, for, as will be seen, the

<sup>1</sup> Tait, in discussion on Abdominal Surgery, before the London Medical Society in April, 1890.

<sup>2</sup> Pozzi, *Traité Gynécologique Clinique et Opératoire*, p. 973.



performance of that operation would have been almost impossible in this case, and have accomplished no good.

I now made a most thorough examination, with a view of exactly locating the growth and of determining, whether it was polypoid, pedunculated or sessile; intra, or extra uterine, single or double. In passing a sound, I found that it entered what seemed a narrow, sinuous track for a distance of nearly six inches. It seemed to pass through the centre of the mass, nearly as far up as the navel. On moving the growth externally it transmitted a movement to the handle of the sound in the deep vagina, so that it was evident, whatever it was, it had an extensive and intimate connection with the uterus.

On the 6th of November, with the assistance of Drs. Malcolm McLean, Ira B. Read, Geo. D. McGauran, Daniel J. Sheahan, James Moran and Thomas Stephenson, at the home of the patient, I proceeded to operate. Having fortified myself with ample assistance, a double relay of instruments, and hoping to encounter but few old adhesions, I hoped to cut rapidly and make a short operation.

Commencing with a long incision, which extended from the umbilical scar to the pubis, the peritonæum was soon reached. This was nicked wide enough, to admit the finger, on which, the scissors was passed, for its division, from end to end. As the lips of this membrane retracted, the convex surface of the large mass rolled into the gap. It presented a most singular sight. On its deep, crimson, glistening surface, running almost vertically from its base upward, lay convoluted in places a round, thick cord; in appearance and consistence it bore a most singular resemblance to the funis. This was the Fallopian tube. Over to the left of, but a little above the umbilicus, was an oblong roundish body about the size of a hen's egg. Large vascular channels, in the form of an extensive plexus, coursed over the entire surface of the growth.

It was evident that we had to deal with an interstitial fibroid, which had originated in the left cornu of the uterus, and by a slow concentric growth, gradually spreading into the submucous tissues; in time wholly encircled the uterine cavity, enlarging mainly on the left side—lifting up, and rolling over the fundus in such a manner, as to turn the uterus completely on its vertical axis.

As seen in the diagram, the left ovary lay on the summit of the tumor, while the Fallopian tube, on its uterine end, lies on the convex border, but as it lengthened out, assumed the outline of a circle, its fimbriæ in convenient proximity to the ovary.

The left ovary, which lay so high up and was dragged so far away from its normal position, had the feel of a cyst, and when punctured gave issue to a quantity of serous fluid; nevertheless, beneath its

capsule there yet remained a considerable fringe of the healthy stroma. In exploring for the right ovary, nothing could be discovered except a flat, small, oblong scar in the broad ligament—the remnant, no doubt, of an organ long since disorganized.

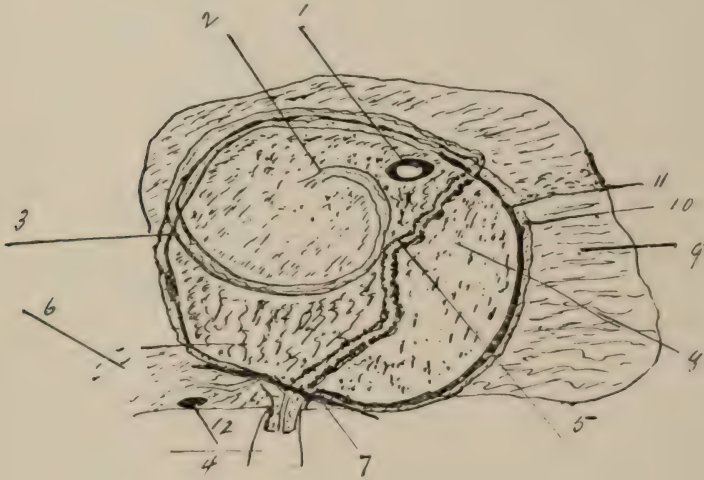


DIAGRAM SHOWING THE RELATION OF THE PARTS.

1. Left ovary displaced with central absorption.
2. Fimbriated terminus of left Fallopian tube.
3. Elongated and hypertrophied Fallopian tube, left.
4. Elongated vaginal cavity, drawn upward.
5. The long, tortoise-like remnant of the uterine cavity.
6. Right broad ligament.
7. Line of incision, just above the internal os.
8. Neoplastic growth.
9. Left broad ligament, anterior lamina.
10. Peritoneal tunic.
11. Cellular or subperitoneal coat.
12. Cicatricial remnant of right ovary.

In order to get at the base of the cervix, on the left side, the layers of the broad ligament had to be clamped off and divided.

Now, that a point was reached low down, corresponding with the internal os, a double-barred steel clamp was applied, and screwed up until it was apparent that the main vessels, were safely occluded.

An oval incision was then made across the anterior aspect of the growth, which was detached down to the vesico-vaginal septum. Another was made with the scalpel posteriorly, when the stub, or uterine body, was cut away with the scissors.

At this stage, the abdomen and pelvis were flushed with warm sterilized water and mopped dry. The uterine arteries were securely ligatured and the whole surface of the pedicle covered by the detached flaps of peritonæum. In fact, we treated the stalk, precisely as we do the stump of an amputated limb.

The clamp removed, we had a clean, dry pelvic basin.

A drainage-tube was now introduced and the abdominal incision closed by two rows of sutures.

The operation occupied one and one-half hours. The patient reacted well, and with the exception of a tympanitic belly, which threatened to spoil the case, everything went well. In this tympanites, castor-oil and magnesia citrate were given, but without effect. I then resorted to rectal injections and the long rubber rectal tube. This latter invaluable expedient gave immediate and lasting relief.

I visited my patient professionally for the last time on November 24th, eighteen days after the operation. We secured good solid union of the incision, and our woman has made a perfect recovery.

In conclusion, I wish to note a few points in connection with these cases of uterine fibroids, and this one in particular. It is known that the treatment of uterine myomata by hysterectomy, when they are interstitial, is of quite recent date in America—two surgeons of Lowell, Mass., Drs. Walter Burnham and John F. Kimball, being the first to venture the removal of the uterus through the abdominal incision. Burnham removed the uterus accidentally, not knowing that it was included in the mass until it was on the table. Kimball, however, performed his hysterectomy deliberately, and is therefore entitled to priority proper. It seems that both patients died, neither surviving forty-eight hours.

It is clear, in this case, that our line of procedure was the *ultima ratio*. Electricity was faithfully tried, and failed.

What would castration accomplish in this case?

Who would think of going up into the umbilical region for the ovary?

No good would have been derived from removing the right ovary, for the uterine end of the tube was impervious and the organ itself, had degenerated.

This long tortoise track—extending from the ostium internum to the farther extremity of the growth—is interesting to examine, as demonstrating how ovulation and the menstrual flux were maintained by the mere shell of ovular tissue, remaining.

The main controversy, in connection with the technique of hysterectomies, has been the management of the stump or pedicle: whether to depend on the searing-irons and cauterize; secure with the ligatures

and treat it intra-peritoneally, or bring the stump into the incision, and retain with the "black knot."

This fear of hæmorrhage is a well-grounded one, and we must leave nothing undone to provide against it. In the young or healthy middle-aged I would prefer to bury the pedicle; but with one suffering from constitutional disease or in advanced years, in whom atheroma of the arteries is expected, to securely guard against secondary hæmorrhage, I would prefer to have the mouths of the vessels within convenient reach.

No antiseptics were used in flushing, though the integuments were thoroughly purified and the instruments well boiled. Indeed, in the last six abdominal sections which I have performed, within the past two months' no antiseptics of any kind were employed within the peritonæum—four of those in the homes of the patients—and in no instance did septic invasion follow.

I do not believe it matters where an operation is performed, provided the hygienic surroundings are proper, the nursing, dieting and medical attendance up to the standard.

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## THE SURGICAL TREATMENT OF ERYSIPELAS, WITH REPORT OF THREE CASES.

BY HERBERT C. ROGERS, M.D.,

Assistant to the Chair of Operative and Clinical Surgery, Long Island College Hospital.

Read before the Brooklyn Surgical Society, November 6, 1890.

It is now generally admitted that erysipelas has for its immediate cause the entrance and development within the human body of a living germ; and, while proof of this is not as yet conclusive, we are in possession of sufficient knowledge to establish this opinion with a considerable degree of probability.

Koch, of Berlin, describes the specific organism of erysipelas as a small *micrococcus* of globular shape. They are from three to four micro-millimeters in diameter, and unite in pairs or form short chains; they are found in the erysipelatous skin, and in the fluid of erysipelatous bullæ, and they advance along the lymphatic channels of the skin as the disease spreads. Multiplication takes place by fission, each half becoming of the size and shape of the parent cell and soon splitting again. Inoculation experiments have shown that the period of incubation is from twenty to sixty hours; so we can estimate the time from

infection to the beginning of erysipelas with a good degree of certainty, as between one and two days. In the great majority of cases infection takes place through a wound or through a slight abrasion of the skin, which may have been so slight as not to have been noticed by the patient.

The object of treatment is to bring the *coccus* of erysipelas, as it travels in and along the lymphatics, in contact with antiseptic fluids. Among some of the methods proposed have been the injection hypodermically of a two per-cent. solution of carbolic acid, or a solution of resorcine, twenty grains to the ounce, the injection being made at the junction of the normal and the inflamed skin. This latter treatment has met with more or less success.

Volkman's assistant, Kraske, modified this treatment by making incisions on the border of the erysipelas, extending them into the normal skin. These first incisions were crossed in a diagonal direction by others, so that when the operation was completed it presented somewhat the appearance of a rail fence. The object of this treatment was to allow the antiseptic fluid to reach the *coccus* in and around the lymphatics; it also tended to render and keep aseptic the part likely to be next attacked by the disease. The wound was dressed with a moist dressing of carbolic acid or one of the mercurial solutions, and the dressings were kept wet with the antiseptic solution.

Reidel and Lowenstein (*Deutsch. med. Woch.*, March 14, 1889) improved the method of Kraske's by confining the fence of incision to normal tissue, about one or two inches from the border of the erysipelas. Their object was to prevent possible infection of an aseptic part. This treatment has given better results than either of the others.

As in all operations performed at the present time, the rules of antiseptic surgery should be strictly followed. With the exception of very young children and nervous women, I do not consider an anæsthetic required, as it takes but a very few moments to make the "fence."

The history of my cases, showing the effect of this treatment, is as follows:

CASE I.—George S., aged twenty three, salesman. He had been on a prolonged spree. During the night of January 5, 1890, he was seized with a chill and violent pain in the left leg, especially severe just above the ankle. He rubbed the leg with liniment, and in the morning sent for medical advice. I found the patient, January 5th, 10 A. M., with pulse at 120, temperature 104°, weak, tongue coated, bowels constipated, no desire for food, severe headache, and in a state of marked mental confusion. On the left leg, just above the external malleolus, was a slight abrasion; surrounding the abrasion, and extending up the leg for a short distance, was a typical erysipelas. As

the patient refused surgical relief, he was ordered ten (10) grains of calomel to be followed in four hours by a seidlitz powder. The leg was enveloped in a moist antiseptic dressing.

In the evening I was again sent for, and found him much worse; temperature  $105^{\circ}$ , pulse 128; leg, which was much more swollen, was tense and shining, and the pain severe. The erysipelas had extended fully an inch up the leg, and downward to the toes. Obtaining consent to an operation, I decided to make a "fence" on only the upper part of the leg. The leg from ankle to knee was scrubbed with soap and water, washed with ether, and irrigated with bichloride solution, one in one thousand (1 in 1000). Selecting a part in normal tissue, just below the knee and about an inch above the border of the erysipelas, I made the "bloody fence," and after irrigating the wound with bichloride solution, one in one thousand (1 in 1000), I dressed it with a large clean towel, moistened in the mercuric solution, and gave orders to keep the dressing wet with the same solution. The patient was told to take thirty grains of sulfonal to produce sleep, and no other treatment was ordered.

January 6th, at 11 A. M., I found his pulse at 90, temperature at  $99^{\circ}$ . On examining the leg it was seen that the inflammation on the anterior part of the leg had extended up to my lines of incision, but had not crossed them, while the swelling was much less. He had had a good night, sleeping most of the time. After irrigating the wound, it was dressed as before. On the following day, January 7th, the temperature was at  $98\frac{1}{2}^{\circ}$ , pulse at 70, the erysipelas rapidly fading, and appetite had returned. The wound was simply redressed.

January 10th, the dressings were removed and discontinued, the line of incision had healed, and the patient was discharged.

CASE II.—William C., aged fifty, U. S., lawyer, while on a fishing trip, stuck a fish hook into the outer side of his right leg. One of his companions removed the hook, using a jackknife to cut it out, and binding up the wound with a piece of rag. The leg gave him but little pain the rest of the day. The following morning it felt stiff, but he went about his business as usual.

June 5th, I was called in, as the patient had been unable to sleep on account of the pain in his leg, which was swollen and stiff. He ate but little breakfast, and between 10 and 11 A. M. he had a chill lasting about twenty minutes; shortly after the chill he vomited. My visit was about 3 P. M., and by this time his pulse was 122, and temperature  $105^{\circ}$ . On the left leg, midway between ankle and knee on the outer side, was a small but angry-looking and painful ulcer. Surrounding the ulcer, and extending up the leg nearly to the knee and down the leg to the ankle, was a well-marked erysipelas. A few blebs and

vesicles were scattered over the inflamed part. Loss of sleep, constant pain, and a naturally nervous temperament combined to induce a mental disturbance amounting almost to delirium.

I proposed the Reidel-Lauenstein method, to which the patient readily consented. A spot for operation was selected just below the knee and about one inch above the inflamed skin. After carefully washing the part to be operated upon with soap, water and ether, and irrigating with bichloride solution, one in one thousand (1 in 1000), I incised the skin around the leg, the width of my incisions being about one inch. The first incisions were crossed in a diagonal direction by others deep enough to draw blood. The wound was irrigated, and dressed with bichloride gauze, kept moistened with a solution (1 in 1000) one in one thousand of the bichloride. Milk diet was ordered, and thirty grains of bromide of soda in case he could not sleep, and no other medicine was given.

June 6th, at 11 A. M., his temperature was 100°, pulse 80, and the erysipelas had extended along the anterior part of the leg to the "fence," but showed no tendency to spread further down the leg. He had slept the greater part of the night *without* the bromide, the pain was very much less, and he relished breakfast. I simply redressed the wound.

June 7th, 3 P. M., I found pulse 78, temperature 99°; the patient was sitting up and feeling better. There was no pain in the leg, and the wound was dressed. The next day he improved rapidly, his temperature and pulse having become normal. Two days later I discharged the patient.

CASE III.—John C., eighteen years old, of intemperate habits. While drunk he received a slight lacerated wound on the back of his left forearm. In a few days this was followed by inflammation and pain up the arm. When examined at the Long Island College Hospital Dispensary, August 5, 1890, I found a foul wound on the back of the forearm just above the wrist joint. Surrounding the wound and extending up the forearm was an erysipelatous blush. After washing the part with soap and water, and irrigating with bichloride solution, 1 in 1000, I scarified a ring around the forearm in healthy tissue, between one and two inches above the inflamed border. The wound was again irrigated and dressed with moist bichloride gauze. The temperature before operation was 102 $\frac{3}{4}$ °. The patient was instructed to keep the dressing moist with bichloride solution, and report the following day.

A week elapsed before he called at the dispensary again, and when he came, August 12th, he gave as his excuse for not seeing me before, that his arm felt so much better he did not think it necessary. His

visit that day was to ask when he might remove the dressings and go to work. He said he had had no pain since the operation. When the dressing was removed, the arm was found in good condition, the erysipelas gone, the incisions around the forearm healed, and the ulcer in a healthy, granulating condition. I dressed the ulcer with iodoform gauze, and at the end of another week, as the ulcer had cicatrized, discharged the patient.

#### DISCUSSION.

Dr. PILCHER.—I have no experience to offer. These are the first cases that I am aware of as having been treated after this method. This success which is reported by our colleague is sufficient to enlist one's interest in it and to lead one to repeat the test if the proper case should present itself.

Dr. WIGHT.—It struck me while the doctor was reading the paper, or rather it recalled some little experience I have had in the last few years, but I do not see erysipelas as often as I used to see it; I don't remember when I have had a case traceable to any operative procedure.

This method of procedure is new to me, but I have had some observations in a few cases in the last two or three years, and I almost always see these forms of erysipelas coming on the face. I have taken simply a solution of bichloride and rubbed it on two or three times a day, sometimes one rubbing will arrest the progress. I can well understand that those little incisions will allow the absorption of this material and arrest the inflammatory process.

Dr. WUNDERLICH.—I have no personal experience with the surgical treatment of erysipelas; but I will say in regard to the method of Kraske, that he not only scarified the margin, but made superficial punctures, about fifteen to twenty to the square inch, and some deeper incisions through the corium, about one to each square centimeter, over the entire surface of the diseased part; near the border he made them more closely together, and where the erysipelas seemed to be progressing he carried them about two centimeters beyond the border. The incisions were first irrigated with a five-per-cent. carbolic acid solution, and subsequently dressed once or twice a day with a two and a half per cent. carbolic acid solution.

The cross sections, six to eight centimeters long and one-half centimeter apart, carried over the border of the affected part into the healthy tissue in such manner that one half of the incision is in the diseased, the other one half in healthy tissue, the incisions crossing each other



at the border line of the erysipelas, are a modification of Riedel. He employed a solution of corrosive sublimate, 1-1000, as a dressing.

Lauenstein was infected on the index finger of the left hand during a laparotomy for the removal of a suppurating myoma of a patient who had been subject to erysipelas. A severe form of erysipelas developed, and notwithstanding the use of a corrosive sublimate solution for external applications and a carbolic acid solution for hypodermic injections, it extended over the entire arm to the shoulder. When the erysipelas had reached the anterior wall of the thorax, chloroform was administered, and cross sections were made along the border of the affected parts and into the adjoining healthy tissue according to the method of Riedel. The incisions were dressed with a 1-1000 solution of corrosive sublimate.

The disease was arrested, although in several places the erysipelas broke through the line of incisions. Several abscesses had to be opened subsequently.

Lauenstein having experienced the good effects of the treatment in his own person, employed it in four cases with satisfactory results. In several instances the disease extended through the line of incisions, and another line of incisions had to be made. This induced him to make the incisions in the healthy tissue, about two centimeters from the border of the diseased part, and he has obtained uniform success since. It seems to me, incisions crossing each other at right angles, leaving no bridge between them, if made in healthy tissues at least two centimeters from the diseased part and dressed with a 1-1000 solution of corrosive sublimate, will in all probability arrest the disease. However this treatment is not applicable to erysipelas of the face.

Dr. RAND.—I have had no experience with the surgical treatment of erysipelas. It would necessarily be limited to erysipelas occurring upon unexposed parts of the body. We would be hardly warranted in scarifying for facial erysipelas, especially as this subsides so readily as a rule under ordinary treatment. Cases have been treated by simply surrounding the erysipelatos area with a barrier of adhesive strips, it being claimed that the progress of the disease will be arrested simply by the pressure thus made.

Dr. LEWIS.—I would like to ask Dr. Rogers if he would consider this method applicable to facial erysipelas.

Dr. ROGERS.—No, sir.

Dr. WIGHT.—I would like to suggest respecting the point that Dr. Rand raises with reference to the application of adhesive plaster. While the explanation is not probably scientific, the fact is probably true, because these microbes have to have air to live on and cannot get to

the surface to breathe very well, that may be possibly why those cases have had favorable results, there is the cutting off the influence of the air.

Dr. DELATOUR.—I can report two cases of erysipelas successfully treated by means of rubber adhesive strips, that started in the fauces and extended out and involved the face. One was the case of a man seventy years old, who was in the hospital suffering from trouble with the knee joint; and, although there was no other case in the hospital at the time, he developed faucial erysipelas, which extended and involved the entire face. The head was shaved, and a band of the ordinary rubber adhesive plaster was passed completely around, surrounding the inflamed area. Although the disease before that was making rapid progress in spreading, it stopped short at the plaster and never went beyond it. The other case, a young man of twenty-seven years, was taken sick with erysipelas in the same way, and the treatment was carried out in the same line. I believe the theory on which this plan of treatment was advanced was that the pressure on the lymphatic vessels shut off the progress of the bacteria along the lymphatic channels.

Besides using the adhesive straps I have seen two cases in which carbolic acid was used, and it worked well in both cases. So that it seems we have two other valuable methods besides the method Dr. Rogers has brought before us.

Dr. PILCHER.—I would like to inquire what the experience of the Society has been with ichthyol and ichthyolate of ammonia as agents of especial value. Both this and naphthaline I have used myself, and in the use of both the patients did well and were conducted to an apparent rapid convalescence. It may have been they would have done just as well with warm water or grease; I do not know; but I think if there has been any experience in the use of these agents in addition to what has been spoken of, it would be interesting to know it.

Dr. DELATOUR.—I know of one case in which naphthaline was used in which no benefit was derived.

Dr. RAND.—We meet with a great many cases of erysipelas in which it does not make much difference what method of treatment we adopt. Some cases are mild and practically self-limited, terminating in four or five days. This makes it difficult to decide upon the exact value of any special treatment.

## REPORT OF COMMITTEE ON THE ORGANIZATION OF THE MEDICAL SERVICE OF THE KINGS COUNTY HOSPITAL.

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Presented to the Medical Society of the County of Kings at its regular meeting of December 16, 1890, by Dr. L. S. Pilcher, Chairman.

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At the meeting of the Medical Society of the County of Kings, held June 17, 1890, the following resolution, on motion of Dr. Paul H. Kretzschmar, was adopted :

*Resolved*, That a Committee of Five be appointed to consider the advisability of requesting the Commissioners of Charity to appoint a Board of Visiting Physicians and Surgeons for the County Hospital in Flatbush, so that the medical profession of Kings County can have a representation in the management of the same : said committee to report back to the Society some plan for carrying out this purpose, upon the receipt of which the Society can confer with the Board of Charities Commissioners, with a view of accomplishing the desired object."

In accordance with this resolution the chair appointed as such a committee Drs. Kretzschmar, Pilcher, Fowler, Bellows and Bogart, Dr. Kretzschmar being chairman of the committee.

Dr. Bogart having declined to serve on the committee, Dr. A. J. C. Skene was afterwards substituted in his place.

The absence abroad of the chairman during the summer, and the pressure of his public duties as President of the Board of Supervisors of the County after his return, prevented the chairman from calling this committee together, or doing any work in connection with the object of the committee, that finally, under date of November 28th last, he requested to be excused from the committee altogether.

Upon receiving this resignation, the President of the Society requested Dr. Pilcher to act as chairman of the committee, and to secure an early report to the Society.

In view of the length of time that has elapsed since the first appointment of the committee, the general interest that has been expressed in its object, and the importance of the interests that are involved in the subject referred to it, the committee have felt that some immediate attention should be given to their work, and that at least a preliminary report should be submitted to the Society. In accordance with this view, they beg leave to submit the following :

## REPORT.

Examination of the resolution, under which this committee was appointed shows two special objects upon which the committee were to confer: 1. The advisability of requesting the Commissioners of Charity to appoint a Board of Visiting Physicians and Surgeons for the County Hospital; and 2. The securing to the medical profession of Kings County some representation in the management of the County Hospital.

These two objects are quite distinct, and are not necessarily interdependent. Some considerations connected with the latter of these two objects ought perhaps to be first presented. The County Hospital is a part of the machinery of the county, under the charge of the Commissioners of Charity of the county, who are appointees of the Board of Supervisors, instituted for the purpose of caring for such destitute and friendless persons as are charges upon the county. The Commissioners of Charity manage the hospital as a part of their public duties, and are responsible for their management directly to the Board of Supervisors, and indirectly to the public at large. Every citizen has a right to inquire into their methods and acts, and to publicly criticise them, if he is not satisfied with the results of his inquiry. The members of the medical profession, of course, have the same right of inquiry and criticism as any other citizen, and no more. Yet it is likely that their criticisms would have special weight in influencing public opinion, through which reforms are to be effected, on account of the special knowledge and the recognized representative character of the medical men of the community. Still more weight would attach to any expressions of opinion made by a large body of physicians, organized as a society, particularly if formulated after proper discussion and deliberation. It is not to be forgotten, however, that it is chiefly by their power in creating and influencing public opinion that physicians, either singly or in a corporate capacity, can influence public affairs or public officials. In view of these facts the committee presume that they will not be expected by the Society to seriously consider the idea of the Medical Society of the County of Kings soliciting from the Commissioners of Charity a share in the management of the hospital under their care. They have no doubt, however, that the Commissioners of Charity would readily acknowledge the value of any suggestions which this Society may be willing to make at any time, which might look toward increasing the efficiency of the County Hospital, and developing possible resources of importance to the community in connection with it. It is natural that a specially educated and enthusiastic body of men such as constitute a medical society should entertain advanced ideas of the character that ought to be given to the

medical institutions of a community; on the other hand, the public officials who are charged with the responsibilities of these institutions have first of all to consider what is practicable to be done, and are little likely to abandon methods which in the past have worked fairly well, until it shall appear either that gross abuses have attached themselves to these old methods, or that an enlightened and progressive public opinion, based on a knowledge of the changes which time is continually working in a community, demands a change.

Two ways are suggested, therefore, as feasible, whereby the Medical Society of the County of Kings can influence the management of the County Hospital if it wishes to do so, viz.: 1. By the expression of its own views by resolution, by addresses to the Commissioners of Charity, or by the appearing of a delegation of its members in person before the Commissioners and presenting their matured views; and 2. By endeavoring to awaken by every proper manner the attention of the general public to the needs and possibilities of its hospital, and creating a public opinion that may be helpful in making practicable the carrying out of reforms or improvements.

Your committee are unanimous in the opinion that the welfare of the County Hospital is a subject eminently proper for the consideration of this Society, and they have no doubt but that not only the Board of Charities Commissioners but also all the members of the present medical staff of the hospital would welcome any inquiry that this Society might see fit to institute into its condition. And if, as the result of such inquiry, any practicable suggestion shall result whereby the accommodations of the hospital may be increased, or its professional work made more fruitful for good, or the institution be made more helpful in developing the educational resources of the county, there will be no persons more ready to heartily lend themselves to the accomplishment of so desirable an end than the gentlemen who have already devoted so long service to this work. Indeed, therefore, in any inquiry which this Society may desire to make, it is important that the Society avail itself of the knowledge and experience of those of its members who are already connected with the institution.

As to the first clause of the resolution under which the present committee is working, viz.: "the advisability of requesting the Commissioners of Charity to appoint a Board of Visiting Physicians and Surgeons for the County Hospital," the committee could come to an opinion only after the possession and weighing of more facts than they have as yet been able to ascertain. While it is true that a similar organization has been found to be feasible and valuable in New York, Boston, Philadelphia and Chicago, and there seems to be no apparent reason why great advantage would not accrue to Brooklyn if its one

great public hospital was organized in this manner, there may be special reasons, inherent in the peculiar conditions of our hospital, which would make such an organization impracticable. The question is of sufficient importance to be given thorough and deliberate investigation and consideration.

It is one that appeals very strongly to the public spirit as well as to the professional enthusiasm of the physicians of Kings County, and ought to receive very earnest and impartial and judicial examination. It goes without saying that no personal considerations of any kind should be allowed to come into the matter, but that the greatest good of the greatest number should alone be considered. The present committee feel that for the examination and consideration of this question a larger committee, whose members would be more widely representative, should be appointed, and that a publicity and dignity should be given to its work that should insure to its conclusions and recommendations a convincing influence. For this reason they request that they be relieved from further consideration of the matter, and that a new committee be formed to go on with the work now brought to the attention of the profession by one occupying so important a public position as that so ably filled by the recent chairman of this committee.

The committee suggest that this new committee be requested to consider the hospital requirements of Kings County at the present time, and to report to this Society at its convenience, what, if any, additional provisions for the sick poor of the county may seem to be required, and what would be the most desirable manner of organizing the required medical and surgical attendance.

The committee suggest also that this new committee consist of nine members and the President of the Society, who shall be the chairman; that Drs. I. H. Barber, H. L. Bartlett and P. L. Schenck, of the present consulting staff of the County Hospital be also among the members of the committee, and that the remaining members of the committee be chosen from the members of the visiting staffs of the six large general hospitals of Brooklyn.

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Pursuant to the suggestion of the above report, the President has made the appointments, so that the committee on the question of the medical and surgical staffs of the Kings County Hospital is now constituted as follows:

The President of the Society, *chairman*; Drs. I. H. Barber, H. L. Bartlett and P. L. Schenck, of the County Hospital; L. S. Pilcher, Methodist Episcopal; Geo. R. Fowler, St. Mary's; Alex. Hutchins, Brooklyn; Alex. J. C. Skene, L. I. College Hospital; F. W. Wunderlich, St. Peter's, and J. L. Kortright, St. Catherine's. W. M. H.

## COUNTY ABUSES.

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Extracts from the Annual Address of P. H. Kretschmar, M.D., Supervisor-at-Large, to the Board of Supervisors of Kings County, January 8, 1891.

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### COUNTY FARM AT ST. JOHNLAND, L. I.

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Among the numerous subjects which are worthy of our careful consideration at this time, none are of more importance than the one relating to the care of our fellow beings who are unable to care for themselves—those unfortunates suffering from disease of mind or body. Although the law has removed the actual management of the public charities from the hands of the Board of Supervisors, it has left affairs in such a condition that without your consent nothing can be done to improve and enlarge the facilities for housing those depending upon the county for protection and support. The County Farm at St. Johnland, Suffolk County, L. I., and the County Hospital at Flatbush, demand the most careful consideration at your hands. With the growth of the county the demands for the support of its poor, sick, feeble and insane become heavier, yet Kings County and the City of Homes would not be true to their general and excellent reputation if they would not cheerfully provide modern facilities for improving the mental and physical conditions of the same, providing that full value be obtained for every dollar expended. Considerable has already been said about the County Farm at St. Johnland, yet the subject is one of such vital importance that it will stand further consideration. It is useless to speculate now about disposing of the whole property to the State of New York, for there is no inclination on its part to invest money in that channel. Neither would it be sensible or reasonable to advocate at this stage the abandonment of the County Farm—it being absolutely necessary to develop the improvements already begun—but it is important to consider the lessons which the past has taught and to carry on the work upon a more economical and business-like basis. Some of the causes which have led to large expenditures of money are not within the control of the parties who are at present in charge of carrying on the improvements; others, however, are. The location of the County Farm at St. Johnland, L. I., forty-two miles distant from Brooklyn, was in itself an error of judgment—if nothing worse—of those who were instrumental in its selection and for which the treasury of Kings County has paid, and will continue to pay, dearly. To relegate the unfortunate poor to a place where, on account of loss of time and expense, it is next to impossible for their relatives and friends to visit them; to locate the public institutions of the Department of Char-

ties and Corrections of our county upon land where, on account of the distance alone, the erection of buildings cost from 15 to 20 per cent. more than it would at more accessible places, and where the county has to pay, necessarily, large sums of money for the transportation of inmates and supplies, are sins which should be properly charged to the members of the Commission of Charities and Corrections who served in 1884, when the law authorizing the selection of a site was enacted; not only the location of the County Farm, but also the nature of its ground have been, and will continue to be, sources of great and unnecessary expense to the county. Hilly ground and thoroughly sandy soil would never be selected for locating public institutions of charities of a large community by careful, thinking, public-minded men, but such is the character of the land upon which the structures erected so far as St. Johnland stand. It is this condition of soil which has nearly caused the destruction of one building—the brick kitchen—and more or less damage to others, and has very recently been directly chargeable for the marvelous expenditure of public funds for so-called “extras” in laying proper foundations for the four large buildings now in the course of erection. The idea of erecting more buildings of the size of Nos. 12 to 15, inclusive, should positively be given up, neither should much money be expended for ornamental terra-cotta outside trimmings or imported glazed white brick. The buildings of the future should be plain brick structures, built in a substantial manner, of smaller size and planned in accordance with the most advanced modern system of treating insane patients. Whatever new work is to be undertaken at the County Farm must be of permanent character, avoiding the necessity, as experienced lately, of repairing the storage reservoir or changing the steam-heating system after three or four years’ service only, or contemplating the establishment of a new electric light plant even before the final payment for the original one has been made. For the information of the new members of your honorable body I present herewith an exact account of the sums expended for County Farm up to date, as well as the various amounts which have been contracted for and will be due in the near future :

[There follows a statement showing that up to the present time there have been expended \$1,693,066.37.]

#### COUNTY HOSPITAL AT FLATBUSH.

The County Hospital at Flatbush has of late become entirely inadequate without any fault of the Department of Charities and Corrections for the demands made upon it, and the necessary steps should be taken without delay to provide for considerable enlargement of the same or



for the erection of a new one either at Flatbush or at St. Johnland, so as to be able to furnish facilities for properly caring for the sick poor. It is unworthy of this enlightened community—which contributes hundreds of thousands of dollars annually to the support of worthy but, nevertheless, private charitable and benevolent institutions—that its own and only public charity hospital is unable to properly accommodate its patients. With only four hundred beds the Charity Hospital has an average of over five hundred patients, many of whom are forced to sleep either three upon two beds, placed side by side, or upon mattresses placed upon the bare floor. The medical service at the County Hospital is about the same as it was many years ago when Brooklyn was in its swaddling clothes. The public hospitals of most large cities in the civilized world have connected with them a staff of active medical men, as visiting physicians and surgeons, supported by an able consulting staff. The Kings County Hospital differs from all others known to me, for its five hundred patients are practically under the charge of only one experienced medical officer, while the bulk of the work is done by young physicians just from college. A staff of consulting physicians and surgeons—including gentlemen of most excellent standing in the medical profession—exists, but their advice and counsel are only occasionally asked for. Everybody who knows anything about modern hospital treatment must admit the advisability and desirability of placing our County Hospital on an equal footing with Bellevue, in New York, and similar institutions elsewhere; but nothing can be undertaken looking toward an advance in any respect until the present facilities of the hospital are greatly enlarged and other improvements inaugurated. It is your duty to adopt such measures as will provide for the funds necessary to enlarge the hospital facilities without loss of time. The sick poor need “more room and more beds,” but the sick prisoners confined in the county jail have no other accommodation than the small and dark cells, entirely unfit for the use of any sick person. Without fear of contradiction I venture to assert that a parallel state of affairs cannot be found in any other city in the civilized world of over 800,000 inhabitants. It is simply cruel not to provide sick prisoners—perhaps some of whom may subsequently be found guiltless of crime—with more suitable places than these small cells and miserable cots. It should not be forgotten, also, that in case of the outbreak of an epidemic of any kind there are no provisions for the separation of those afflicted from the other prisoners. Steps should be immediately taken to establish a suitable prison hospital at the county jail.

# THE BROOKLYN MEDICAL JOURNAL.

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Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the printer's charge to the Journal.

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## *EDITORIAL.*

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### COUNTY ABUSES.

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We take great pleasure in calling the attention of our readers to the admirable address delivered by Dr. P. H. Kretzschmar, Supervisor-at-Large, to the Board of Supervisors of this county at their recent annual meeting. It is a fortunate coincidence that extracts from this address and the report of the committee appointed by the County Society to consider the matter of a visiting staff to the Flatbush Hospital both appear in this issue of the JOURNAL.

Dr. Kretzschmar deserves the thanks of the profession and the laity for the clear and forcible manner in which he sets forth the wants of the sick poor of the county, and we shall be much disappointed if, with his influence behind the movement, great reforms are not instituted within a twelvemonth.

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### THE FATHERS OF MEDICINE.

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As we anticipated, the engravings of Hippocrates and Galen, which appeared among the advertising pages in the January number of the JOURNAL, have been much admired by our readers. Dr. Hunt has kindly consented to continue this series, making the selection from his

valuable collection, and to prepare a brief sketch of the lives of our heroes. In this number will be found representations of the much-honored *Æsculapius* and *Aristotle*.

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### KOCH'S LYMPH.

The public interest in the use of Koch's "lymph," or, as Koch calls it, *Parataloid*, for the treatment of varied diseases has diminished somewhat, while the professional interest remains unabated. Injections are being made almost daily in the hospitals of New York by such men as *Jacobi* and *Shrady*, and we should soon be in receipt of some definite information which will help to determine the value of the specific and the diseases for which it is adapted.

The description just given by Koch of his method of producing *Parataloid* does not seem to be sufficiently definite to enable a reader to produce it for himself, and we must still wait until more exact instructions are given. It would seem, however, that only in properly equipped laboratories under the direct supervision of competent men should it be manufactured.

From the various analyses reported, it would appear that there is more than one kind of "lymph" in the market. Those who employ the treatment should assure themselves that they have the genuine and not the spurious article.

So far as we have heard, but one physician in our city is in possession of any of this potent material, and in no public institution is it being used. The Regents of the Long Island College Hospital have sent *Dr. Joshua M. Van Cott, Jr.*, to Berlin, and he will doubtless return with enough for use in that institution. In the abstract of *Progress in Pathology* in this number of the *JOURNAL* *Dr. Van Cott* has given us an admirable resumé of the present status of the subject.

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### NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.

This Society has recently completed its twenty-second year. Looking over the annual report of the trustees, just published, it is gratifying to note the evidence of increasing prosperity. At the close of the fiscal year the Society numbered nine hundred members. At the present rate of growth the membership bids fair to reach twelve or fifteen hundred before the next annual report.

By vote of the trustees at their last meeting the sum now paid on the death of a member is \$825. It is expected that the amount of the payment will be advanced to \$1,000 in course of the next few months.

A recent amendment of the By-Laws makes this sum the limit, at least for the present. This claim of \$1,000 will cost a member \$10 per year—a rate much below the ordinary cost of life insurance. That sum, moreover, is payable in installments of \$1 each. The Society also maintains a benevolent fund for the relief of sick and distressed members, their widows and orphans. Any practitioner of medicine in the State is eligible to membership in the Association, provided he is in good health and regular standing. The initiation fee for applicants under thirty years of age is \$2; between thirty and forty, \$3; between forty and forty-five, \$4; between forty-five and fifty, \$5. The assessment on the death of a member is the same for all admitted under fifty years of age, viz., \$1. For those admitted after that age the assessment is \$2.

Brooklyn physicians desirous of joining the Association may obtain further information by applying to Dr. G. R. Westbrook, 175 Schermerhorn Street, to Dr. N. W. Leighton, 143 Taylor Street, examiners for the Society, or to any other member of the Association.

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#### THE MATTISON PRIZE.

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The prize of \$400, offered by J. B. Mattison, M.D., of this city, announced in the December number of the *JOURNAL*, should be the means of stimulating experimenters to investigate the effect of opium addiction upon the kidneys. Not that we think that any one who is competent to carry on original research in this field will determine so to do for the amount of money which is offered, for such an inquiry as is hoped for would most certainly continue doing the greater part of the two years allotted, and \$400 would be a ridiculous sum for such an expenditure of time; but this amount will doubtless meet all the expenses necessary for the investigation, and that is, as we understand it, Dr. Mattison's idea. The reward will come to the winner of the prize in the consciousness that he has enriched medical literature in what is as yet a barren field, and furnished a groundwork for the treatment of many of those unfortunates who are enslaved by opium.

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#### THE BROOKLYN GYNÆCOLOGICAL SOCIETY.

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By a unanimous vote of the members present at the last meeting of this Society, it was decided to publish its proceedings in *THE BROOKLYN MEDICAL JOURNAL*.

As this Society includes some who are recognized the world over

as authorities in this important department of medical science, we congratulate our readers on the prospect of having the opportunity to share in the ripe experience of these acknowledged experts.

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OBITUARY.

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DR. JUSTUS E. GREGORY.

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Dr. Justus E. Gregory was born in 1841, at Sand Lake, near the city of Troy. As a boy he showed a natural inclination for the study of medicine, and upon reaching a suitable age entered upon his studies under the preceptorship of Dr. Hubbel, of Troy, and a few months later attended lectures at the Albany Medical School.

At the breaking out of the Civil War, Dr. Gregory, still an undergraduate, was appointed as a medical cadet, and went to the front with the troop known as the Black Horse Cavalry. This was disbanded some months later, and the doctor returned to his studies at Albany.

Upon graduating, he immediately entered the navy, and was ordered to the James River with the gunboat squadron, where he filled the position of acting fleet-surgeon, and was present at a number of engagements, among others the storming of Fort Fisher. While so engaged he contracted a severe form of malarial fever, which necessitated his return home on sick-leave until sufficiently restored for duty in the Naval Hospital in Brooklyn.

At the close of the war Dr. Gregory began practice in South Brooklyn, where he was successful in establishing a large general practice. A few years ago, having acquired a competency, he determined to retire from the practice of medicine, and returned to Troy. After the first novelty of leisure had worn off, the desire for occupation was strong, and the doctor returned to active professional life again, in Brooklyn, which he continued until his sudden and untimely death.

In 1871 he was married to Miss McKinney, of Troy, who with one daughter survives him.

As a man Dr. Gregory was of a generous and social nature, beloved by his family and esteemed by his friends. As a physician his therapeutic knowledge was exceptionally correct, and his clear intelligence and retentive memory, united to the faculty, which comes only after a wide experience, of appreciating conditions in disease by a sort of intuition, made his opinions respected by all the members of his profession with whom he came in contact.

## PROCEEDINGS OF SOCIETIES.

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### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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A regular monthly meeting of the Medical Society of the County of Kings was held at the Society rooms, 356 Bridge Street, on Tuesday evening, December 16, 1890, at 8 o'clock.

Dr. Walter B. Chase in the chair.

There were about 100 members present.

The minutes of the previous meeting were read and approved.

The Council reported favorably upon the following applicants for membership, and recommended that they be elected :

Drs. George D. Holsten, Paul Halsted Fairchild, Calvin T. Barber, Wm. A. Griffiths, John W. Van Dusen, Jos. W. Smith, Frank E. Wilson, Julius C. Rappold, Jr.

The Council also reported that the name of Dr. M. J. Leland, as an applicant for membership, had been withdrawn.

On motion the above report was adopted.

The following application for membership was presented :

Dr. George William Neidecker, 330 Van Brunt Street, L. I. C. H., 1889; proposed by Dr. Herbert C. Roberts; Dr. Henry L. Cochrane.

The following gentlemen were declared elected to membership: Drs. Henry Schilling, John O. T. Hill, J. Barney Low and Charles G. Purdy.

#### SCIENTIFIC BUSINESS.

The first paper of the evening, entitled "Vesical Hæmorrhage during Pregnancy," by Dr. Margaret A. Cleaves, was read, and discussed by Drs. Stewart, Jewett and Burge.

#### REPORT OF COMMITTEE ON OBSTETRICS.

The first paper of this committee, entitled "The Adherent Placenta," by Dr. A. Ross Matheson, was read, and discussed by Drs. Jewett, Dickinson, Stewart, Mosher, Morton.

The second paper, entitled "Puerperal Insanity," was presented by Dr. J. C. McEvitt, and discussed by Dr. Shaw.

Dr. J. B. Mattison exhibited some new and improved galvanic and faradic batteries, with new and original electrodes, which were commented on by Drs. Shaw and Hunt.

The report of the Obituary Committee on the death of Dr. J. E. Gregory, was presented by Dr. Morton, and adopted as read.

The report of the "Committee on Recommendation of a plan for reorganizing the Kings County Hospital" was presented by the Chairman, Dr. J. S. Pilcher (the original Chairman, Dr. Kretzschmar, having resigned and Dr. Pilcher appointed to succeed him), and on motion of Dr. Stuart the report was received, and the recommendations therein contained adopted.

A communication was received from Dr. E. D. Page announcing that he would offer at the next meeting the following proposed amendments to the By-Laws:

PROPOSED AMENDMENT TO BY-LAWS.

Chap. I. Sec. *a*. At the annual election of officers and delegates the polls shall be open from 8.30 P. M. till 9.30 P. M., the chair giving five minutes' warning before closing the polls, such notice being given upon the ballots; also

*b*. The ballots shall be cast in a box provided for the purpose, stationed in a convenient place in the assembly rooms of the Society.

*c*. If at any election a re-ballot, as provided in Chap. I., Sec. 5, be necessary, the polls shall remain open at the discretion of the chair.

*d*. There shall be five tellers appointed by the chair as heretofore, the first one appointed being the chairman.

*e*. It shall be the duty of the Chairman of the Board of Tellers to prepare the ballot-box, receive the ballots as they are tendered, and deposit the ballots tendered into the ballot-box. It shall also be his duty to open the ballot-box and announce to the tellers the candidates voted for on each ballot, separately, and when finished, to furnish the chair a written list of all names balloted for and the number of votes each has received, which report shall be concurred in by the Board of Tellers. This report shall also become a part of the minutes of the annual meeting.

*f*. In any election should any ballot cast contain the names of more candidates for any office, set of offices, or delegates than are to be elected, that ballot shall count blank as to that special office, set of offices, or delegates.

*g*. Ballots shall be provided as specified in Chap. I., Sec. 5.

On motion, it was resolved that the proposed amendment be printed side by side with the original By-Law now in force, on the regular call for the next meeting.

On motion of Dr. Maddren, duly seconded, it was resolved that at the coming annual election the polls be declared open from 8.30 P. M. and closed at 9.30 P. M., and that it be so stated on the ballots.

## NOMINATION OF OFFICERS FOR THE ENSUING YEAR.

The following nominations were made in the usual manner :

*President*—Frank E. West. *Vice-President*—Wm. Maddren, Z. T. Emery, Jos. H. Hunt. *Secretary*—Wm. M. Hutchinson. *Assistant Secretary*—David Myerle. *Treasurer*—C. N. Cox. *Librarian*—Lawrence Coffin.

*Censors*—G. McNaughton, Arnold Stub, Z. T. Emery, R. L. Dickinson, Geo. E. Law, J. W. Fleming, G. R. Butler, J. C. McEvitt, Eliza M. Mosher.

*One Trustee*, for term of five years, in place of Dr. Alex. Hutchins, Walter B. Chase, Alex. Hutchins, D. G. Bodkin, G. R. Fowler.

*Delegate to State Medical Society*—Reuben Jeffrey, Wm. Browning, A. J. C. Skene, J. L. McCorkle, Lucy Hall, Joel W. Hyde.

The Chair appointed the following Obituary Committee on the death of Dr. Sidney Allen Fox, viz.: Drs. Maddren, McNaughton, and Bailey.

There being no further business, on motion, adjourned.

W. M. HUTCHINSON,  
*Secretary.*

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BROOKLYN GYNÆCOLOGICAL SOCIETY.

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A regular monthly meeting of the Brooklyn Gynæcological Society was held at the Society Rooms, 356 Bridge Street, October 3d.

Dr. Dickinson presented two rubber stamps representing in outline the relations of the pelvic organs, and the bony pelvis at the brim, which when stamped on the pages of a case book enabled a clear and accurate history to be kept. The stamps are made by Barton, of 318 Broadway, New York, who also has a stamp outlining the chest. An abdominal stamp is now in preparation by Dr. Dickinson.

Dr. Jewett presented a new silk suture, prepared in paraffine, which consisted of common Corticelli silk, a spool of which is put into heated paraffine at a temperature of 250° and allowed to remain for an hour. This thoroughly sterilizes it, every fibre being thoroughly impregnated with the paraffine, even to the inside layer next to the spool. It can be kept indefinitely in a bottle of alcohol.

*Scientific Business.*—Dr. Frank Baldwin read a paper entitled "Some Suggestions regarding the Nature and Treatment of Galactorrhœa," which was discussed by Drs. Jewett, Dickinson, Skene, McNaughton, Maddren, Gordon, Matheson, Pratt and Chase.

Dr. Chase related a case where he had performed a second operation for lacerated perinæum immediately after labor, for the purpose



of removing two or three sutures from the vaginal sulci which he had previously placed there, and referred to the advisability of immediate suturing of the freshly lacerated perinæum.

This subject was discussed by Drs. Dickinson, Jewett and Skene.

The Secretary stated that Dr. Joshua M. Van Cott, Jr., had signified his willingness to act as pathologist to the Society. A vote being taken, he was declared duly elected to fill such office.

On motion the meeting adjourned.

L. GRANT BALDWIN,  
*Secretary.*

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A regular monthly meeting of the Brooklyn Gynæcological Society was held at the Society Rooms, 356 Bridge Street, November 7th.

Dr. Dickinson presented an additional rubber stamp representing a front view of the abdomen and chest, with the heart, liver, stomach, kidney and transverse colon outlined, for use in recording the growth of abdominal tumors and enlargements and displacements of the organs within the thoracic cavity. The chest as represented was somewhat masculine, in order to have room for the organs, but the hips were broad and feminine.

The doctor called attention to the fact that a much better impression could be gotten from these rubber stamps if they are simply laid on the paper and struck a sharp blow than if a continued and uninterrupted pressure be applied.

He believed that the maker of these stamps should receive the support of the profession in recognition of the pains he has taken to bring out the stamps. The German stamps, presented by Schultz at the Berlin Congress, he considered were much too large and cumbersome.

Dr. Dickinson presented a specimen of membranous dysmenorrhœa in which the patient presented a typical neurotic history. She was treated with applications of iodine for the cervical catarrh, but the subsequent membrane passed was twice as thick as before. This treatment was stopped and the tonic treatment taken up, under which the membrane again became thinner, as is shown by the specimen.

He also presented drawings of membrane passed by a virgin who had been passing them for some twelve years. The membrane was some three inches in length, running down to the cervix, and on the lower part were marks of what appeared to be Nabothia's follicles.

She was treated with douches for the slight amount of leucorrhœa, and a certain amount of mild athletic exercise was taken to tone up the muscular system and distract the attention from the nervous

system. Two months have elapsed now without a membrane having been passed.

*Scientific Business.*—Dr. A. H. Buckmaster read a paper entitled “The Treatment of Pelvic Abscess, with Report of a Case opening into the Bladder, reached by Cystotomy and treated by Intra-Vaginal Drainage,” which was discussed by Drs. Byrne, Skene and Maddren.

The matter of the publication of the Society’s Proceedings was discussed at some length, and on motion of Dr. Raymond it was

*Resolved.* That the question of the publication of the Proceedings of the Society (the papers read and discussions thereon) be made a special subject for discussion at the next meeting, and that the members be so notified prior thereto by the Secretary.

Dr. Matheson stated that at the last meeting of the Board of Trustees of the County Society it was decided to extend the courtesies of the County Society’s building and meeting-room to all societies composed mainly of members of the County Society. On motion the Secretary was instructed to convey to the Board of Trustees the thanks of the Gynæcological Society.

The Secretary called attention to the provision of the By-Laws that twenty ballots should be cast in the affirmative in order to elect a new member, and that as the present membership was but twenty-one, there might be some difficulty in electing a candidate who was proposed for membership.

The matter was discussed at length, and the Secretary was finally instructed to enclose to each member of the Society, with each ballot, a stamped envelope addressed to himself (the Secretary), to facilitate the balloting by mail.

To prevent this difficulty or the possibility of it in future, Dr. Dickinson announced that at the next meeting he would propose the following amendment to Sec. V., C. II., of the By-Laws :

Amend Sec. V., of C. II., of the By-Laws, to read as follows :

... “that it shall require a four-fifths affirmative vote of the existing membership to elect a new member,” instead of twenty affirmative votes, as it now reads.

The Secretary was thereupon instructed to give notice to the members of the Society that the above amendment would be voted on at the next meeting.

There being no further business, the meeting adjourned.

L. GRANT BALDWIN,  
*Secretary.*



ARISTOTLE.

"Aristotle, an accredited time-honored descendant of Æsculapius."

Aristotle was the son of Nicomachus, a physician of Stagyræ and Phæstias; and Nicomachus was descended from Nicomachus the son of Machæon, the son of Æsculapius Diogenes Lærtius, trans. by C. DeYounge, p. 181; Russell, *Hist. and Heroes of Med.*, p. 13).

The founder of the school of the Peripatetics, and the chief of the Peripatetic philosophers.

One of the most illustrious characters of ancient Greece. Born, 384 B.C., at Stagyræ, in Thrace, whence he is usually called the Stagyræite. Died, 322 B.C. Studied in the school of Plato.

This school was the Lyceum, a grove in the suburbs of Athens, where he held daily conversation on the subjects of philosophy with those who attended him, walking as he discoursed, whence his followers were called Peripatetics.

The teacher and friend of Alexander the Great.

The writings of Aristotle are filled with allusions to our art, and from it he drew many of his happiest illustrations.

Though not a practitioner of medicine, was of the family of the Æsclepiadæ. He was well skilled in natural history and the anatomy of the lower animals, as well as in the medical doctrines of his own and modern times.

There is reason to believe that before he opened his school at the Lyceum, he dabbled more or less with drugs.

He is chiefly celebrated in anatomy for the great number of animals he dissected, and the comparisons which he instituted between their structure and that of man, who, he remarks, is the only animal that extends itself on the back in sleep.

His principal anatomical discoveries were in connection with the nerves, which he appears to have observed only in animals.

He maintains that the ear does not communicate by any opening with the brain, yet he tells us that the brain sends to each ear a vessel, which seems to be the acoustic nerve.

He perfectly describes the strong and tendinous optic nerve of the mole; but erroneously asserts that there is no connection between the brain and the organs of sense, and he therefore derives all the senses from the heart.

He has the merit of having first placed in the heart the origin of all vessels, and demonstrates that its structure indicates that that organ is intended to give origin to blood-vessels.

He first gave the name of aorta to the largest artery of the body, but he attributes to it the same functions as the veins.

The liver, he says, sends a vessel to the right arm, so that bleeding should always be practiced from this limb in diseases of that organ.

He was the first observer who described the four stomachs of ruminating animals, and explained the phenomena of rumination.



## BROOKLYN SURGICAL SOCIETY.

*Annual Meeting, October 2, 1890.*

Dr. PILCHER in the chair.

*Scientific Business.*—“Report of a Case of Abscess of the Thigh, with Arthritis of Knee,” by Dr. H. L. Cochran. Discussion.

Dr. Pilcher exhibited a photograph of an immense fibro-cystic tumor of the face and neck, which had been successfully removed.

Annual report of the Treasurer read and approved.

Election of officers for 1890-91 :

President—Dr. Geo. Ryerson Fowler.

Secretary and Treasurer—Dr. H. Beeckman Delatour.

Third Member of Council—Dr. Lewis S. Pilcher.

Adjourned.

H. W. RAND, *Secretary.*

*45th Regular Meeting, October 16, 1890.*

Dr. FOWLER in the chair.

*Scientific Business.*—“Report of Two Cases of Fracture of the Skull” and of a “Case of Skin-Grafting for Lupus,” by Dr. Fowler.

Paper by Dr. Lewis S. Pilcher, entitled “The Question of the Propriety of Suturing Recent Fractures of the Patella.” Discussion.

Adjourned.

*46th Regular Meeting, November 6, 1890.*

Dr. FOWLER in the chair.

*Scientific Business.*—Dr. Fowler presented a case of rupture of the gall-bladder.

Paper of the evening was read by Dr. H. C. Rogers on “The Surgical Treatment of Erysipelas, with Report of Three Cases.”

The following new members were proposed: Dr. Chas. H. Terry, Dr. David Myerle and Dr. J. F. Valentine.

Adjourned.

*47th Regular Meeting, November 28, 1890.*

Dr. FOWLER in the chair.

*Scientific Business.*—Dr. Geo. Ryerson Fowler read a paper entitled “Report of Five Cases of Nephrectomy.”

Drs. Terry, Myerle and Valentine were elected to membership.

Adjourned.

*48th Regular Meeting, December 4, 1890.*

Dr. FOWLER in the chair.

*Scientific Business.*—Dr. Jarvis S. Wight read the paper of the evening, “Report of a Case of Esophagotomy.” This was followed by discussion.

Adjourned.

*49th Regular Meeting, December 18, 1890.*

Dr. FOWLER in the chair.

*Scientific Business.*—Paper by Dr. J. B. Bogart, entitled “Report of Ten Cases of Alexander’s Operation.” This paper was discussed by Dr. Edebohls, of New York, and the members of the Society.

Adjourned.

H. BEECKMAN DELATOUR,

*Secretary.*


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## PROGRESS IN MEDICINE.

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### SURGERY.

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BY GEO. RYERSON FOWLER, M.D.,

Surgeon to St. Mary’s Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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#### RESECTION OF THE INTESTINE BY A NEW METHOD.

(W. Maunsell, Transactions of the Intercolonial Medical Congress of Australia, Melbourne, 1889.) The new method appears very simple and certain, and may be employed in all regions where resection of the digestive tube is required, including that of the pylorus. As clamps the author very ingeniously employs large safety pins, the arch-shaped arm of which is passed over a large flat sponge spread over the bowel, and the pointed arm or pin portion is passed through the mesenteric attachment and then pushed through the overhanging end of the sponge and secured.

The method of suturing is designed to imitate the process of invagination. Both ends of the bowel after resection are secured to each other by means of two temporary sutures, the one placed at the mesenteric attachment and the other diametrically opposite. At a distance of one inch from the cut surface of the central end of the resected intestine, and parallel to its long axis, an incision is made and the

bowel opened. Through this opening the free ends of the temporary sutures placed at the point where the bowel ends are brought together are passed, being led through the opening left between the divided ends of the gut. These are then drawn upon at the point where they emerge from the slit in the gut, when an invagination of the intestine is easily produced. The digital portion is thus drawn into the central and there secured by circular suturing, the knots being placed in the lumen of the bowel. The author recommends a straight needle, passing this through the entire intestine, hooking the loop from the lumen of the bowel through the temporary opening made, and cutting it across. The temporary slit in the intestine is finally closed.

#### UPON THE PATHOLOGY AND SURGICAL TREATMENT OF INGUINAL BUBO.

Poelchen, of Königsberg (*Archiv f. klin. Chirurgie*, Bd. xl., p. 556). The author calls attention to the fact that in the majority of cases incision into those glandular infiltrations constituting bubo are quite insufficient, and are frequently followed by prolonged suppuration and not infrequently lead to an unfortunate termination in the shape of involvement of the lymphatics of the lesser pelvis, perforation of the cavity of the hip-joint, and death through peritonitis, pyæmia, or hæmorrhage from eroded vessels. He quotes his own experiences in the total early extirpation of all chancres and suturing the wound immediately. In all cases immediate union within fourteen days was accomplished, and with the exception of a single case, there was no further infection of glandular tissue. He protests against relying upon the local application of iodine in the beginning of bubo and the employment of pressure. In the treatment of the affected glandular structures, he prefers a free longitudinal incision, and after extirpation, the wound cavity is permitted to fill with arterial blood, believing that under the blood clot rapid granulation tissue will develop.

#### UPON CHELOID.

Lelor and Vidal (*Annal. de Dermatol. et Syph.*, 1890, No. 3; *Centralblatt f. Chirurg.*, No. 47, 1890). The authors discriminate between cheloid which arises from cicatricial formation, and which it is claimed is not true cheloid, and that which occurs spontaneously. They claim to have proven by histological research that the latter, without doubt, does occur, in the sense that there may not have existed a cicatrix preceding its development, although it may be conceded that a traumatism too slight to attract attention may have preceded the appearance of the disease. This, however, does not explain those cases in which there occurs a symmetrical development of the disease in several localities, either synchronously or following each other rapidly. They there-

fore distinguish three conditions which are commonly called cheloid : 1st, a true spontaneous variety of the disease ; 2d, a secondary or cicatricial cheloid ; and 3d, a hypertrophic cicatricial development, which, according to the authors, is not to be classed as true cheloid. In the first variety a striking feature consists in a multiple, and, to some extent, symmetrical development of the disease. In the second the new formation arising from the cicatrix extends in such a manner that in the peripheral portions the papillary body remains intact. In the last a hypertrophic cicatricial development occurs, in which the connective tissue new formation simply fills up the gap where loss of substance has occurred ; in addition, the tissue of this variety is less dense, is more amenable to treatment, or may even undergo spontaneous cure.

In the first and second variety, or true cheloid, a recurrence of the disease is almost certain to take place following excision ; while, in case of the hypertrophic cicatrix, this operation may be expected to achieve satisfactory results. In true cheloid the authors recommend multiple linear scarifications, to be repeated in several séances, and upon each occasion in different directions. This is followed by dressings consisting of moist compresses wrung out of boric acid solution. On the following day the parts are dressed with mercurial plaster. In order to render the operation painless, local anæsthesia is produced by means of chloride of methyl. Brocq's method by electrolysis may be employed in cases of small cheloid.

#### DISINFECTION OF THE HANDS.

Franz Boll (*Deutsche med. Wochenschrift*, No. 17, 1890). The author, in the course of some experiments upon the best means of disinfecting the hands of the surgeon, in which the methods employed by the bacteriologists were used to demonstrate freedom from germs by gelatine cultures, comes to the conclusion that the course pursued in Mikulicz's clinic in Königsberg offers the best known practical means of accomplishing this object. This consists of vigorously brushing the hands for not less than three minutes with potash soap and water, after which they are immersed for a half minute each, first in a three per cent. solution of carbolic acid, and then in a 1-2000 sublimate solution. Finally, the subungual spaces and folds are thoroughly rubbed and cleansed with ten per cent. iodoform gauze which has been dipped in a five per cent. solution of carbolic acid. Experiments made to determine the efficiency of simple soap and water cleansing, showed this to be entirely unreliable.



# OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

## CHILD-BED PATHOLOGY IN OLD PRIMIPARÆ.

Erdmann (Arch. f. Gyn., B. xxxix., H. 1.) E.'s conclusions from a study of this subject are as follows:

The conditions peculiar to old primiparæ are found in all primigravidæ after the twenty-seventh year. They are found at varying ages below this limit in individual cases according to personal peculiarities.

Late primiparity occurs most frequently in women of late sexual development and of feeble physique.

The principal mark of age is rigidity of the soft parts.

Pelvic contraction is more frequently met with increasing years.

Œdema is not more common in aged than in younger primigravidæ.

The same is true of hyperemesis.

Eclampsia is much more frequent.

So too are malpresentations, especially breech births.

There is a greater tendency to failure of the pains and the duration of labor is increased.

Operative interference is accordingly more frequently required.

Tardy involution is oftener observed.

The maternal mortality, thanks to antiseptics, is not greater than in the first labors of younger women. The same statement applies to child-bed morbidity. The infant mortality is capable of reduction to the usual average by proper management, particularly at what may be termed the cervical stage of the labor.

A prominent factor in the infant mortality as well as in abortions in old primiparity is syphilis, thirty-six per cent. of the one and twenty-three per cent. of the other being due to that cause.

## TREATMENT OF PERINEAL LACERATIONS.

Von Ott (Arch. f. Gyn., B. xxxix., H. 1). The operation of Simon and that of Hegar, E. regards as substantially the most rational of the various methods of perineal repair.

The numerous improvements that have been proposed relate chiefly to the figure of the freshened surface and to the methods of maintaining complete coaptation during the process of union. The

shape of the denuded surface, however, must depend on the shape of the cicatrix and the direction of the tear. No prescribed figure can suit all cases. The denudation should be so ordered that the suture may reunite the corresponding structures of the sundered parts and that with the least practicable tension.

For the complete and permanent union of the wound surfaces the aseptic are no less important than the mechanical requirements of the suture. In extensive lacerations the author has used the tiered suture. This method is less satisfactory, however, in old than in fresh tears. The continuous suture is objectionable since should sepsis occur at one point of the suture it may spread throughout its length. On the whole he prefers the interrupted silk suture.

The flap operation of Tait the author justly condemns since it ignores the anatomical relations of the parts. The claim that no tissue is sacrificed in the flap method is only an apparent advantage. There is in reality no economy of tissue material. The flap is thicker than the tissue removed in denuding and it includes a certain amount of muscular structure. A large portion of the flap lies in a loose fold in the vagina and is therefore lost to the new perineum. Not infrequently it sloughs. Moreover greater tension is required to maintain contact of the opposed surfaces owing to the material lost in the flap.

The results according to Rodsewitsch are by no means flattering. Of thirty-six cases operated by the flap method union was more or less imperfect in twelve.

Simplicity and rapidity of execution in the method of Tait must be conceded but these alone should not decide the choice of operation.

#### THE ANATOMY OF LABOR.

Barbour (*Br. Med. Jour.*, Nov. 8, 1890). This paper is continued from the preceding number of the *Journal*. The following conclusions are added to those already given in the last obstetric abstract:

While the anterior vaginal wall retains, during labor, its usual length and thickness, the posterior extends to more than twice its former length and becomes very thin.

The fetus is elongated during the second stage by the straightening of the spinal column.

The flexion of the head becomes, during labor, less pronounced than it was during pregnancy.

Rotation of the head takes place before that of the shoulders and is therefore independent of it.

The process of the moulding of the head consists in pushing of the occiput underneath the parietal bones and a distortion of the plastic head towards its unsupported part.

The placenta does not become separated as a result of the diminution of its site during the second stage.

The membranes become separated, during the second stage, up to the retraction ring but not above it.

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## PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital; Physician to the Department of the Chest, Brooklyn City Dispensary.

### NOTES ON CARDIAC DISTURBANCES.

Pye-Smith (Prog. and Treat. of Diseases of the Heart, Hunterian Society, Nov., 1890) gives an interesting summary of various forms of heart disease. He discusses *idiopathic tachycardia*. Here the number of beats is increased. The length of the first sound is diminished, and the period of rest is shortened. Many conditions may cause a temporary tachycardia in a perfectly healthy heart. Among these are exercise and mental emotion. If the causative condition be removed, the heart beats become normal. Any pulse constantly rapid—*over eighty beats per minute*—in an adult means the presence of disease, not necessarily of the heart. A physiological tachycardia is generally accompanied by palpitation. The condition is common where organic cardiac disease exists. The idiopathic form is rare and its prognosis is unfavorable. *The irritable heart* is closely related to excessive exercise or great bodily strain. Rest and careful diet are necessary in its treatment. The author's observations on the *intermittent pulse* are in keeping with those of other observers. Alone it is without significance and is most generally due to slight causes, such as gastric disturbance. Cases are mentioned where the condition existed for more than twenty years. Intermission with irregularity is of grave import, and indicates serious organic disease. *The pulse of high tension* is generally associated with interstitial nephritis. It indicates renal change, and when found should always require an urinary examination. The views expressed as to its importance are open to criticism. It is true, as the author says, that the increase shows that cardiac nutrition is going on well, but it certainly is not an indication of healthy or desirable condition. *Hypertrophy from overstrain* is found most commonly in athletes or in young boys whose development is not complete. Remedies aiding cardiac nutrition are indicated, but many cases do not respond to treatment. *Rapid dilatation, per se*, is met with as a secondary condition to certain acute affections, such as rheumatic fever, scarlet fever,

acute nephritis, and other febrile disorders. Although not stated by the author, it is probable that the dilatation is here so rapid that there is not time for the hypertrophy to develop. Fatal syncope is to be dreaded in this condition. Various forms of alcohol are the remedies to be used in combating this acute affection. It is interesting to note that the author does not believe that fatty degeneration is common in heart affections. There is but little evidence on physical examination to throw light on the subject. An excessive growth of fat over the heart may, it is stated, interfere with perfect action and produce ill effects. *Fatty degeneration is always found in phosphorus poisoning.* The discussion of valvular lesions commences with the subject of ulcerative endocarditis in which the presence of auto-infection from the inflammatory condition is well brought out. The author terms it an "internal pyæmia." The situation of the inflammation is such that the products of suppuration are being constantly carried to distant parts of the body, causing secondary troubles. For the term pulmonary, in describing stenosis and regurgitation, the author substitutes "dextro-sigmoid." Valvular lesions with their accompanying muscular changes have always different prognoses than the hypertrophies and dilatations occurring without valvular disease. Aortic regurgitation is regarded by the author as the lesion of greatest seriousness, of most rapid course, of least responsiveness to treatment, of greatest tendency to sudden death. Aortic stenosis is put down as having the best prognosis. Cases of mitral regurgitation respond best to treatment, and even if grave secondary changes have occurred, if cardiac nutrition can be established, the same holds true. The author gives certain statistics of heart cases in Guy's Hospital. There were 95 fatal cases of aortic disease; 69 of these had mitral disease (secondary). The ages were as follows: 1 under 10; 14 between 10 and 20; 40 between 20 and 40; 33 between 40 and 60; and 3 above 60. There were 41 cases of death from mitral disease. There were 6 between 10 and 20; 14 between 20 and 40; 20 between 40 and 60; and 1 over 60. Of 34 cases in which death was due to cardiac syncope valvular disease was found in 21 cases. The duration of organic disease of the heart is larger in women than men. In prognosis the nature of the life led is most important. Secondary diseases, acute in their character, affect the diseased heart unfavorably. The author records many cases where the disease had long existed. One case of aortic regurgitation had existed for ten years; another of double disease had existed for twenty years. One case of aortic stenosis had lasted many years, the patient dying at the age of seventy-five. The influence of rest and proper diet in the treatment of organic heart disease is well illustrated in a case of the author's. The patient was a London cabman, exposed to all the

inclemencies of the weather, having mitral regurgitation, who was admitted into Guy's five times with a staggering heart. Four times he was dismissed improved, and returned to work. The last time the case resulted fatally. The author condemns Oertel's treatment, on the ground that forced gymnastics are always to be avoided. The most excellent and important part of the paper are the paragraphs describing ulcerative endocarditis.

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## PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M. D.,

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### THE PRODUCTION OF IMMUNITY FROM DIPHTHERIA.

E. A. von Schweinitz and W. M. Gray have announced in a preliminary note in the "Medical News," January 3, 1891, their results in the production of immunity against experimental diphtheria in the lower animals.

They give no details as to their method, but state that they have succeeded in obtaining from cultures of Klein's bacillus a chemical substance which renders guinea-pigs treated with it insusceptible to diphtheria upon subsequent introduction of strong virus into the system, while the control animals died in from 24 to 48 hours. They further believe that the experiments being made will demonstrate that they have a substance which will serve to control or prevent diphtheria in man. They think that methods for the treatment of typhoid fever, tetanus and other contagious diseases can be worked out in a similar way. This work has been done in the laboratory of the Bureau of Animal Industry at Washington.

### FATIGUE AND INFECTION.

Immunity from the various infectious maladies has been known for a long time to be influenced by fatigue. Persons debilitated by overwork and worry are more liable to contract certain contagious fevers than those in good general health. Charrin and Roger, in a recent number of "Arch. de Physiol.," have made some experiments upon small animals to determine the influence of fatigue on infection. The animals experimented upon were white rats. Thirty-six of these animals were inoculated, part with a weak culture of anthrax and part

with "charbon symptomatique." A part of these animals were then put in a revolving drum and allowed to run from two to eight hours.

The remainder of the rats were kept for control.

The effect was very noticeable that of the control animals a number survived the inoculation, while those put in the drum invariably succumbed. The same results were obtained with cats and dogs. These results accord with clinical observation, and with the results of Solowieff upon horses.

#### ESTIMATION OF CARBONIC DIOXIDE IN AIR.

Dr. J. H. Kellogg publishes in the "Sanitarian" for December, 1890, a new apparatus for the estimation of  $C O_2$  in air, based upon a method first published in "Handbook of the Medical Sciences," article on  $C O_2$ , by E. H. Bartley. The apparatus consists of two graduated litre bottles, arranged so that the water may be siphoned from the upper to the lower one; the air forced out of this latter is made to bubble through an upright narrow cylinder containing a measured quantity of perfectly saturated lime water mixed with distilled water, and colored with phenol-phthalin.

As soon as the lime in the water is all converted to the carbonate by the  $C O_2$  in the air forced through it, the color disappears.

The author has found that 1 c. c. of  $C O_2$  will decolorize 2 c. c. of saturated lime water. By taking 2 c. c. of lime water to begin with, it then follows that the volume of air used contains 1 c. c. of  $C O_2$ . The method is easily performed, and reasonably accurate.

#### ANALYSIS OF KOCH'S LYMPH.

The "Record" of December 20th, p. 701, gives a report taken from the "Lancet" of an analysis of this remarkable fluid. The analyst is Prof. Snitzler, of Vienna. The results show that the liquid gave the reactions for mucin, albumin, peptone. It gave no reaction for cyanogen, gold, sugar, sulphur, phosphorus, or the alkaloids. It seems to the author that the active principle of the lymph is some form of toxalbumin or enzyme. This does not accord with the analysis recently published by a French chemist, who found cyanide of gold and certain ptomaines, supposed to be those produced as side products during the growth of the tubercle bacillus. Is it possible that the two specimens were of different composition?

## PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,

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### KOCH'S LYMPH.

1. Fränzel and Runkwitz "Systematic Use of Koch's Specific against Tuberculosis in Internal Phthisis." (Deutsch. med. Wochenschr., 1890, No. 47.)

2. W. Levy "Report of the First Cases of Surgical Tuberculosis Treated by Koch's Method." (*Ibid.*)

3. Kohler and Westphal "On the Experiments with Koch's Remedy for Tuberculosis." (*Ibid.*)

4. V. Bergmann "Communication Concerning Results Obtained by Koch's Method." (*Ibid.*)

5. Fleilchenfeld "Concerning the Course of Some Cases of Tuberculosis of Various Organs Treated by Koch's Method." (Therapeutische Monatshefte, 1890, Sonderheft.)

The "Centralblatt f. klinische Medicin," No. 49, publishes in abstract, under the above titles, observations by leading German physicians and surgeons on the clinical action of Koch's lymph in a variety of cases of tuberculosis, both medical and surgical. These are translated literally that the readers of the JOURNAL may have exact information regarding the present state of the question.

F. and R.'s experiments were upon phthisical subjects for the most part; but a number of perfectly sound individuals were treated with the lymph for control. The following were the results of injections in healthy cases. Small doses induced no reaction; large doses produced marked elevation of temperature ( $39^{\circ}$  C.), shaking chills, pains in limbs, faintness. A young man, with hereditary history and night-sweats, but no bacilli in sputum, showed strong reaction to small doses, the inference therefore being that he had phthisis.

The remaining cases cover phthisis in mild and severe forms.

The first group: 4 cases of advanced tuberculosis pulmonalis. Progress of the disease in all these cases not arrested; but 3 cases reacted, with elevation of temperature. Autopsy on 2 cases revealed no healing (cicatrization) in the lungs, which was hardly to be expected, however, from their short course, although considerable slimy masses were found in the cavities.

The second group comprised 8 cases of less advanced tub. pulmonal. On the reaction of these patients, F. states as follows: About

six hours after the injection of small doses (0.001 gramme), chilliness, and of large doses, rigor occurred. The temperature rose from 38 to 40° C. General condition of discomfort, anorexia, faintness, and drawing pains in the breast, giving to patients a very troubled appearance.

But the symptoms, after a short duration, slowly disappear. Injections on the next day of equal quantities produced either no reaction or only slight symptoms. Rigors recur in the rule with each stronger injection, until reaction finally ceases. The fever is probably to be regarded as expressing local pulmonary reaction. Specific action upon the bacilli asserts itself in two ways: 1. The bacilli diminish in course of treatment, to disappear fully in time, as F. observes, in all mild cases. 2. They show with clearness alteration of form; many are smaller and thinner; some show end swelling; some are broken through in the middle, others are in isolated fragments.

Evidences of pulmonary induration were subsiding, and the bronchial secretion lessening. Stunted bacilli were thrown off with the surrounding tissue. The fever vanished, also night-sweats; cough reduced to a minimum; the appetite good; and increase of body weight remarkably satisfactory.

In cases with extensive cavity formation, with great exhaustion, little usefulness can be expected. Also such complete healing as in lupus is not to be looked for, even in incipient pulmonary phthisis. Separated masses containing stunted but living bacilli often remain behind and will, as soon as the influence of the lymph ceases, develop with renewed energy of growth, again to infect the organism. Consequently, it will always be necessary in such cases to determine at definitely increasing intervals whether they have retained their immunity against Koch's specific. Much in relation to these questions remains to be settled in the future.

L. reports next three cases of lupus. The first of these was the first case injected with Koch's fluid. A twenty-three-year-old patient had suffered for nine years with lupus, which had spread over the entire left arm, the front and back of the throat, and the greater part of both cheeks. On the 8th October, at ten o'clock A. M., 0.1 c. cm. of the remedy was injected into the skin of the back. After a few hours the temperature rose, following a rigor very quickly and reaching 40.6° C. at three P. M. Patient in the evening unconscious and delirious. Unconsciousness and fever persisted until noon October 10th. Synchronously with the appearance of fever the diseased areas of skin reddened and became very considerably swollen. On the 9th October, before noon, the disease picture was most pronounced. The swellings were considerable. The scars in those places where no lupus nodes were to be found were but little altered. But everywhere, even where



only the smallest lupus nodes were visible, these projected far beyond the level of the skin, and were surrounded by a dark-red zone, two finger-breadths wide.

The tumors on the forearm and back of hand were still more markedly altered. They were greatly swollen, and of dark blue color. The arm was now suspended in a Volkmann's splint. The red borders around the diseased spots, and the swelling of the arm very soon subsided. The serpiginous borders appeared dried up. The tumors dried rapidly, resembling burnt scabs, as if produced by red heat. As these dropped (in about eight days), the skin under some was already firmly cicatrized, while under others there was good granulation tissue.

On the 27th October a second injection was given; the symptoms were not so marked as the first time, and still less so with further injections.

The second case of lupus was that of a thirty-four-year-old patient, for eighteen years a sufferer with lupus of the left upper extremity and shoulder. She showed, after three injections, a general tendency to cicatrization.

The third patient, aged sixty-one years, suffered for eight years with lupus of nose and both cheeks, with destruction of both *alæ nasi*. Very marked improvement was noted after three injections. L. then describes in detail the reaction, remarking that in certain cases functional disturbances were produced, such as, for example, painful distention of urine from retention, observed in a case of tubercular cystitis. In patients with tubercular arthritis, the pain and swelling had already vanished in two days: many could use their joints much more easily. Two children with tubercular arthritis of knee joint, and one man similarly affected in the left wrist, were discharged cured; also a fistula from a tubercular metatarsal bone appeared to be healed. At the close of his investigation, L. draws attention to the immense advance in diagnosis and therapeusis of surgical tuberculosis with the introduction of this new remedy.

K.'s and W.'s observations were made in all on 12 patients. In 4 cases injections were commenced with 0.1 c. cm. of a one-per-cent. solution of the lymph, and the quantity successively raised to 1 c. cm.

Four times injections were made, as follows: One of 1.0, one of 0.2, two of 0.3, one 0.5.

More than 1.0 of a one-per-cent. solution was not used in a single dose. The injections were almost painless and accompanied only with local reaction. In 4 patients having positively no tuberculosis, experiments were made upon ulcers and cicatrices having no relation to tuberculosis for the purpose of determining if the lymph caused any change in them. These cases all had mild fever, cephalalgia and

anorexia, but no change was observed in either the wounds or cicatrices. From a differential diagnostic standpoint this circumstance is of great weight. Cases treated for tuberculosis were: 2 of facial lupus, 1 each of rheumatic arthritis of ankle joint with tubercular cicatrices in the throat, tubercular cicatrices of throat, tubercular arthritis of ankle joint; tub. arthrit. of knee joint, spina ventosa of middle finger. General reaction was not the same in all patients; still a certain regularity in their order was unmistakable. One can say: 1st. That tubercular patients react astonishingly more strongly to the lymph than non-tubercular with equal doses in both cases:

2d. That chilliness or chill appears in six hours, followed by elevation of temperature up to  $40^{\circ}$  C. and over.

3d. That before the end of twenty-four hours the temperature generally sinks to normal or subnormal.

4th. That reaction is less on repetition of the same dose.

5th. That increasing doses do not in any way necessitate increasing temperature rise. The pulse frequency rose considerably during the fever, being repeatedly observed as high as  $130-140^{\circ}$ , and once  $160^{\circ}$  per min. It was mostly high, pretty tense, the radial full. Indications of cardiac weakness were not observed. As striking appearances the authors observed in many cases an exanthem resembling scarlatina, or also a large flaky, leafy exanthem.

In single cases icterus was also observed. The local action of the injections was most striking in lupus. After much swelling and reddening of the lupus spots and their immediate surroundings, scaling occurred, under which formed smooth cicatrices. Complete cure has not yet been reached in either of the two cases.

In cicatrices resulting from suppurating or extirpated tubercular glands there were reddening, swelling and pain, which had subsided after some days. However, the reaction was of varying intensity in the several scars on the same person. In arthritis, swelling was in part observed, which vanished after some days. Mobility was improved. In the case of spina ventosa of the left middle finger, with complete fixation of the middle joint, the swelling was reduced to 1 cm., and flexion increased to nearly a right angle after injection of 0.08 c. cm. of a one-per-cent. solution of the lymph.

The authors state in conclusion that their announcements are simply a classified review of the present state of the matter, a conclusive decision not having been reached.

Von Bergmann reports cases brought before an illustrious assemblage, on the 16th November, in four groups; 13 cases of tubercular dermatitis including the vulva, 4 cases of tubercular lymphadenitis of the throat, 16 cases of tubercular osteitis and arthritis, 4 cases of tuber-

cular laryngitis. Five patients with lupus were injected in the morning prior to the clinic, and revealed in the evening reddening and swelling. Five more were injected before the eyes of the assembly. Finally three patients were introduced, having been for a long time under treatment. With these patients, after initial reddening and in part enormous swelling, scabs formed; these scabs were in part desquamated, leaving smooth red cicatrices. The patients were, perhaps, ten days under treatment. Two had a number, one only a single injection.

In three cases of tubercular lymphadenitis, the glands were susceptible after the first injection, and later became diminished. In the first patient there appeared after each injection a pale red papula exanthem on the neck, shoulder and superior aspect of the breast and back, which soon vanished again. The dose in these cases was always 1.0 of a one-per-cent. solution. V. B. then presented 4 patients with tubercular arthritis which were injected in the morning. All had high fever, the susceptibility in the joints had materially increased, and marked swelling was observed. After seven patients with tuberc arthritis had received inoculations, V. B. showed still five cases which had been treated already for some time.

In these cases, after four or five injections, varying in strength according to age, the swelling and pain were, for the most part, reduced, and in some mobility improved. Finally, four cases of tubercular laryngitis were shown. In these, after the injection into the larynx, reddening and swelling appeared.

V. B. then showed a case in which the diagnosis wavered between laryngeal carcinoma and laryngeal tuberculosis, and which, through failure of any reaction, was decided to be carcinoma. V. B. closed his demonstration by drawing attention to the significance of the new remedy in the diagnosis and therapeusis of surgical tuberculosis; and words of praise were spoken for the great discoverer who had presented this remedy to the world.

F.'s work, coming from Levy's private clinic, contained descriptions of three cases of lupus already described by Levy. F. then described two cases of tubercular arthritis of the knee joint, one of the ankle, and one of the astragalus with fistula. In the knee-joint cases motion improved, and removal of pain and swelling were obtained; the fistula healed completely. Also in a case of glandular tuberculosis extraordinary diminution in the size of the gland followed marked swelling.

In closing, F. speaks of pulmonary tuberculosis. Three patients with incipient phthisis have been discharged as cured, as the sputum contained no bacilli, and the auscultatory symptoms had materially subsided. It was not stated whether reaction to the lymph had also ceased. In the worse forms of phthisis with commencing cavity forma-

tion, final healing was not observed. Still the patients were free from fever, night-sweats had vanished, and the sputum was diminished and more mucous in character. On the other hand, increase of weight and absence of cough were not observed.

In briefly summing up these clinical reports it is to be remarked : 1st. That the several clinics, though quite widely separated from each other, show striking similarity in their reports. In other words, these men of eminence and undoubted integrity, and working quite aloof from each other, are essentially alike in their conception of the effects produced by the injection of Koch's lymph into tubercular and non-tubercular patients.

2d. These effects, namely, the phenomena which obtain after exhibiting Koch's lymph in the human body, are of two classes : *a*, general ; *b*, local. The general effects are those common to febrile reaction ; and they are doubtless due to disturbance of the nervous and vascular mechanisms, though in just what manner is not as yet understood. The local effects seem to be essentially expressed in a resolution of tubercle tissue, in which disintegration the bacilli share, at least to an extent—shrinkage and lessening in their number having been recorded by at least two independent observers.

In all tuberculous affections where the localization is superficial, it is easy to see the vast utility of Koch's discovery ; for the reason that in these cases the necrosed tissue, with its contained bacilli, can find easy separation and elimination from the body. But, as has been already remarked in the above reports, it is difficult at present to conceive just how these separating and disintegrating masses are to be extruded from the deep organs and tissues ; and the reports on the advanced cases of pulmonary tuberculosis go to show this, and the unsatisfactory results are clearly pointed out.

Notwithstanding this doubtful element to the success of Koch's lymph, it is further to be observed that the new remedy is a very "astonishing" and powerful aid to diagnosis in both medical and surgical tuberculosis. This alone must render it brilliant in all time to come. The profession has already for some years practised successfully and with but little difficulty the analysis of sputum for Koch's tubercle bacillus, and this diagnostic method has far surpassed the best stethoscope in the early discovery and early prognosis of pulmonary tuberculosis. We now seem to possess a method of diagnosis which will supersede even sputa analysis, and which in combination with the latter will afford opportunity to make very exact estimates of the presence and progress of the disease, thus rendering other therapeutic and hygienic measures vastly more successful.

There are other questions involved in Koch's discovery which can-

not be even intelligently discussed until more time has passed and clinical studies pushed further. Prominent among these is the question of immunity. Does the exhibition of the lymph in the body of a human being with a tubercular diathesis render him immune? And if it does, how long is the period of immunity? These and many other questions can only be answered in the future. Certain it is, that the results thus far obtained are sufficiently encouraging to make it the duty of all large institutions for the treatment of the sick to spare no pains in thoroughly investigating the matter. And lasting results can only be obtained, whether negative or positive, by the enthusiastic co-operation of hospitals in all parts and in all climates of the world.



## OPHTHALMOLOGY.



BY RICHMOND LENNOX, M.D.,

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DELIRIUM AFTER CATARACT OPERATION.

At the meeting of the French Ophthalmological Society (May 7, 1890), Parinaud read a paper on the delirium which is sometimes observed after cataract extraction, and while not denying the influence of restricted diet and the effect of the operation itself in exciting in the patients an excessive self-consciousness, concludes that it is due especially to the prolonged occlusion of the eyes. Grandclément and Galezowski believed that atropin used locally is sometimes responsible for the cerebral disturbance in such cases. Chibret held that alcoholism should be noted as a cause of the delirium.

In the "Recueil d'Ophtal.," July, 1890, Malgat reports the notes of two such cases from the clinic of Prof. Ledda, of Cagliari. Both were acute. The first patient, sixty-seven years old, was of habitually impetuous character, fond of solitude and wine, and of an annoying disposition. In his own country he was regarded as half fool. Atropin instillations were made four days before the operation, which passed without accident. On the evening of the second day the patient became uneasy, and made several attempts to remove his clothing, but was finally persuaded from his purpose by his attendants. Ledda removed the bandage on the third day, found the condition of the eye satisfactory, and instilled a few drops of a collyrium of neutral sulphate of atropin. All seemed going on well, when in the evening the patient was seized with intense delirium, during which he removed his bandage. He left the dispensary, and was found lying on

his back in the street by Dr. Ledda, who immediately had him transferred to the hospital. Almost on his admission he became calm and obedient, and recovered in due course of time in spite of the re-opening of the corneal wound and some loss of vitreous.

In the second case the fact is remarkable that the delirium occurred before the operation under the manifest influence of atropin, three hours after the instillation of a one-per-cent. collyrium of the neutral sulphate. The toxic effects yielded on the evening of the same day to the action of strong coffee. Three days later further instillations of a one-half-per cent. solution were made without result, and again on the sixth day without effect. The extraction then performed was a complete success.

Cases of atropinism from the use of collyria are by no means rare, and occur in the practice of every ophthalmologist. The elder Sichel, who first spoke of cerebral accidents consecutive to cataract operation, reported eight cases in 1863, and numerous reports have been made since. Sichel attributed the delirium to the complete occlusion of the eyes. Borelli (1863) referred it to the diet and to a certain predisposition on the part of the patient. Saltini, who reported four cases in 1881, claims that one has to do in these cases with a vague delirium of complex etiology. He excludes any action of atropin, and attributes the delirium to a special idiosyncrasy, to the darkness, the diet and the mental uneasiness.

Ledda also believes the causes of the delirium to be multiple, and includes the patient's character, a predisposition to mania, and the effects of atropin. He says that one must admit a predisposition to cerebral trouble, either congenital or following the abuse of alcohol. This special idiosyncrasy existing, either the darkness, the mental impression produced by the fear of not recovering the sight, the diet or atropin may excite the delirium. Consequently the operator should resort early to any therapeutic measure which may prevent the delirium. Ledda advises the administration before the operation of chloral or bromide of potassium, perhaps even preliminary treatment, for the purpose of testing the susceptibility of those who are to submit to operation.

Malgat believes that the prophylactic treatment of Dr. Ledda is worthy of serious attention, especially when the patients are of a nervous temperament or addicted to alcohol. He himself regularly administers to all his patients .5 gramme of bromohydrate of quinine, and can only congratulate himself on this preventive treatment.

## GYNÆCOLOGY.

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BY WALTER B. CHASE, M.D.

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### INTRA-UTERINE MEDICATION.

(Therapeutic Gazette, Dec. 15, 1890.) Edmund Falk's paper before the Berlin Med. Society emphasizes the importance of treatment and the frequency of diseases of the endometrium. General uterine treatment is confined to the specialist, yet it is necessary that every physician should know how to treat these conditions. He objects to intra-uterine injections, even though previous dilatation has been done. For dilatation of the uterine canal, he recommends a tampon of iodoform gauze, medicines in the liquid form to be applied with a goose-feather or raw cotton on applicator. Women who have not borne children, a previous dilatation of the cervical canal is necessary, and the treatment in cervicitis is particularly applicable, because higher up, the remedies are so influenced by the secretion they exert no real effect upon the mucous membrane. Another method of treating the endometrium is by tents and salves, and for these reasons a clear apprehension must be had of the capacity of absorption of the genital tract. As a rule, nothing is known of the power of absorption in the virgin uterus. In his experiments, the uterus being isolated, fifty minutes after the introduction within it of tents medicated with iodide of potassium, the presence of iodine could be demonstrated in the urine; the power of absorption from the vagina was much more slow, and the mucous membrane of the labia seemed so perfect as not to have any power of absorption. As the mucous surface of the uterine cavity is a ready absorbent, many remedies introduced into it will exert a general systemic effect, which should be taken into account. This method, then, of the use of tents is one of wide applicability. Those made of cocoa-butter are readily absorbed, while those made with gelatine, form a few days after their introduction, a tenacious mass, which does not dissolve in water at 60° (within half an hour), and can for this reason only act in the uterus as a foreign body. Landon adopted the use of grooved sounds as were used by Cooper in the treatment of chronic gonorrhœa, cocoa butter being the menstruum. Falk tried the antrophors introduced by Stephan, of Dresden, being thin spiral pieces of metal which were covered with the medication in an easy coating of glycerine. These curls of metal wire, made of highly-tempered wire as a basis, in order to be less liable to bend, by which means they adapt themselves to every desirable shape and reach every wrinkle of the mucous surface of the uterus. The wire is not heated very hot, so

as to retain its elasticity, and that it shall not cause any abrasions after the meltings of the medication, is first protected by an insoluble gelatine covering, the gelatine having been previously sterilized by heat. Before applying the medicament, the parts are disinfected (by means of cotton carried by a pair of forceps or tent-holder), which is passed through the orifice of one of these instruments, without dilating; after this the woman lies down ten minutes, then the wire is removed by means of a thread fastened in the handle of the applicator.

Verf has demonstrated by experiments with numerous drugs that the viscid secretion of endometritis becomes thinner, changes its color, gets colorless, and finally disappears, and that erosions caused by its secretions also disappear. In fungoid endometritis the use of the antrophors are specially recommended, the application being of one per cent. dilution of chloride of zinc, three-tenths to one per cent. sulph. copper, ten per cent. of resorcin, and a five to ten per cent. dilution of tannin.

Gonorrhœal endometritis was similarly treated, the medicament being two per cent. dilution of creosote, and with it one-tenth per cent. of the bichloride of mercury, followed by a mixture of one per cent. chloride of zinc and one-tenth corros. subl., the chloride of zinc penetrating directly into the mucous membrane, making it possible for the bichloride of mercury to reach the depths where the gonococcus dwells.

Among the list of consequences Falk mentions, especially after certain remedies, are hæmorrhage, uterine colic (the latter being prevented by the addition of cocaine), and finally, in isolated cases, after the application of great strength, there was inflammation of the surrounding viscera, so that even by this method the dangers of intra-uterine medication are not overcome.

#### ON STERILITY.

Lawson Tait (Cleveland Medical Gazette, Nov., 1890) lays down this rule: If pain precedes menstrual flow, it is tubal; if the pain follows the appearance of the flow and chiefly referred to the back and spasmodic in character, it will be found to be due to some mechanical obstruction in the uterus. Sterility following this symptom should be followed by dilatation. When the menstrual epoch is unaccompanied by pain, dilatation will not avail.

#### THE DIAGNOSIS AND TREATMENT OF DISEASE OF THE TUBES.

Landau, Berlin (Journal of Obstet., Oct., 1890), after mentioning the difficulty of diagnosis of tubal cysts, whether hydro- or hæmato-, refers to two pathognomonic signs. In hydro-salpinx, the sac being not alone elastic but the muscular wall remaining intact to touch, resembles an air cushion, and it is possible to express this fluid into



the uterus and collect it. In purulent tubal cysts, the above-mentioned sign is generally lacking, because the muscular wall has its contractility impaired by meso-salpingitis. Here the cysts are smaller and fixed by adhesions. Another point in differential diagnosis is puncture of the sac through abdominal walls or vagina. He admitted the possibility of thus tapping an extra-uterine pregnant tube, but believed it to be free from danger. He (L.) has done laparotomy for hydro- and pyo-salpinx fifty-two times with but one death. All his patients, however, were not cured, particularly those in whom the ovaries were not removed. He states there is an intermittent form of hydro-salpinx which occasionally passes into the chronic, and he believes he has cured this intermittent form by puncture.

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## DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

Clinical Professor of Dermatology, Long Island College Hospital: Attending Physician, Brooklyn Hospital; Surgeon to Skin and Throat Department, Brooklyn Eye and Ear Hospital.

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### ON THE RELATION OF IMPETIGO HERPETIFORMIS (HEBRA AND KAPOSÍ) TO DERMATITIS HERPETIFORMIS (DUHRING).

(L. A. Duhring, Phila. Amer. Jour. Med. Sciences. March, 1890.) The author in this interesting paper re-reviews the subject of the still mooted question of the relative identity of the two above-named diseases of the skin; and gives, as seems to us, very cogent reasons for believing in such. He does not, however, mention the letter which was read at the Paris Dermatological Congress in 1889, in which he appeared to have conceded the points he now still makes; and the tone of his whole article is (as appears to us) needlessly apologetic. It is an article entirely worth reading, and his plan for the non-multiplication of long names in the terminology of skin diseases is an earnest and timely one.

#### DERMATOLOGICAL BOOKS.

Two works have but recently appeared, written by French authors, whose very decided merit every reviewer concedes. They are (1st) "A Treatise on the Morbid Histology of the Skin," by Drs. Vidal of Paris, and Leloir of Lille. (2d) "A Treatise on the Therapeutics of Skin Disease," by Dr. Brocq, Paris. The latter author must be considered one of the most prolific and voluminous writers of the day on matters dermatological; but while inclined to what would to some appear an over-minuteness in his classifications and subdivisions of diseases, and

application of remedies the book, is at once conceded by the reviewers to be clear, and masterly. It has been a long time since the two epithets could be used in conjunction when speaking of a French work in connection with this subject, and will be all the more welcome. The diathetic doctrines, so peculiar to the French school, in this latter work, have been treated of and modified so as to agree with the general common sense, or consensus, of and among other nations.

NOURRICES ET NOURRISONS SYPHILITIQUES.

Fournier, Paris (Gazette des Hôpitaux, Nov. 25, 1890, p 1251). The above paper, under the literally translated title of "Nurses and Syphilitic Nurslings," is an interesting, important and curious one. Interesting it can be easily seen to be in all relations, and of importance equal to interest; curious in regard to the many-sided ethical views of the question that he brings up, and defends or opposes; and again also in the apparent limitations of freedom of speech from the physician to patient, in the eyes of the French law, and professional ethics. Certainly it would not seem to be so hard to do substantial justice to patient, nurse and friends, and do so delicately, as he makes it appear. His closing paragraph (it being understood that the nursing woman has consulted him in a suspicious case) is as follows: "When you have told the nursing woman whether she can or not continue nursing the child, your *role* is finished. To all questions as to the nature of the evil, silence the most absolute is imposed upon you. In answer to demands for a certificate, or even of a prescription, a formal refusal. Permit me to insist on this, the absolute refusal to prescribe at all; the wet-nurse has the right to all the information she can obtain, but the parents alone have the right to have their child cared for medically. You will then simply reply to all the prayers of the nurse: "The consultation has been for you; I have no word to add, not a scrap of writing to give."

A STRONG TINCT. OF IODINE.

A. Eddowes. One of the best solvents of iodine is methylated spirits of wine. With this any strength of solution can be made in a very short time, which is a convenience when we wish to apply a powerful remedy to a very limited area.

UNNA'S GELATINE DRESSING FORMULA.

℞ Oxide of Zinc . . . . .	
Pure Gelatine . . . . .	aa 10 parts.
Glycerine . . . . .	
Aq. destillat. . . . .	aa 40 parts.

FIXED APPLICATION FOR TREATMENT OF WARTS.

- ℞ Hydrarg. Bichlor..... 1 part.  
 Collodion Flexile..... 30 parts.

To be applied once daily upon the wart and around its base.  
 (KAPOSZ.)

FOR PEDICULI PUBIS.

- ℞ Hydrarg. Bichlor ..... 1 part.  
 Vinegar..... 500 parts.

This application is said not only to kill the pediculi, but also to remove the nits.

GLYCERINE FOR ICHTHYOSIS.

Lailler (*Jour. des Malad. Cut. et Syph.*, Sept., 1890). The author recommends the following :

- ℞ Hydroleate of Cherry Laurel ..... 10 parts.  
 Glycerite of Starch..... 100 parts.

Commence with a couple of inunctions daily. Later on, one only ; and when the skin has regained its normal appearance, and nothing more than preserving its suppleness is required, once a week is sufficient.

Before commencing the application of the glycerol, the skin should be freed from scales by bathing, and this repeated sufficiently often. Massage, etc., can be applied.

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MEDICAL JURISPRUDENCE.

BY SIDNEY V. LOWELL.

LEGISLATION.

Before the Legislature of 1891 commences to place new acts upon the statute books, attention may profitably be given to some of the acts of the last session, that they may not be forgotten.

The curious little act entitled "An act for the prevention of blindness" should be kept in mind by physicians, though, singularly enough, midwives and nurses are therein made subject to its penalties, rather than more responsible persons. It provides that: "Should any midwife or nurse, having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant to report the fact in writing within six hours to the health officer, or some legally qualified practitioner of

medicine of the city, town or district in which the parents of the infant reside. Any failure to comply with the provisions of this act shall be punished by a fine not to exceed \$100, or imprisonment not to exceed six months, or both."

The act took effect on the first of last September. I find, on inquiry at the Health Department of this city, that they have received no reports whatever under the act.

It really becomes the duty of every physician who may be employed where there is the conjunction of a nurse and a weak-eyed infant, as spoken of in the act, to see that the nurse should make the report. It will be noted that it must be in writing. While every one is supposed to know the law, it is much more likely that the educated and reading physician should be so informed than an ordinary nurse. To make a nurse liable to fine and imprisonment, when the responsible physician is not liable to any penalty, seems somewhat harsh to the weaker party.

Institutions training nurses should instruct them as to the law, and provide them with blank forms for the notice required.

The act in relation "to the care and custody of the insane" is entirely concerned with provisions as to insane or weak-minded women having the escort of a suitable woman while being taken to any asylum or institution under the order of any court or officer. The cost is made a charge upon the county.

The fact that such legislation should be necessary is a commentary upon the last years of the nineteenth century.

The fact there is such an act is something physicians should remember.

In this connection the agitation of Mrs. Josephine Shaw Lowell, for the employment of women to watch over females at the station-houses, should be considered by the authorities in New York City and Brooklyn.

The act providing "for the employment of a woman physician in the State asylums and hospitals" was doubtless intended to be in the same line, and is probably by the same draftsman. It provides that the superintendent or chief medical officer of each asylum or hospital for the cure of the insane, except the State Asylum for Insane Criminals, shall appoint a resident woman physician, a graduate of a medical college, to perform such medical duties in and about the cure and treatment of the women insane as their superior shall direct.

Their compensation is fixed at \$1,200 per annum. They are to be "in addition" to the number of resident physicians.

There is an obvious reason that the officers at a station-house and the doctors in an asylum should have some protection themselves while

dealing with women often under insane delusions. It seems very appropriate for divers other reasons that female help should be available for women in insane asylums.

The legislation in relation to "boards of medical examiners for the examination and licensing of practitioners of medicine and surgery" was the result of so much movement among the medical societies that it is fair to suppose their members are familiar with its terms.

The act took effect from the first of last September, and seems to effectually regulate the subject. The provision that the Regents of the University of the State shall appoint the examiners from lists furnished by the three prominent medical societies—the Medical Society of the State of New York, the Homœopathic Medical Society and the Eclectic Medical Society—seems to be a very good one. The appointing power is of the most respectable kind. It is also a good thing to bring home to the people the uses and functions of the Regents, a body for many years but little known.

The provisions made of recent years, that no person shall be permitted to practise law or physic unless a graduate of a college—that is, of a general institution of learning—or shall have passed an examination under the Regents' direction as to matters pertaining to general education, were essential to good government.

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## CORRESPONDENCE.

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### THE PREVENTION OF NARCOTIC ADDICTION.

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*To the Editors of the Brooklyn Medical Journal :*

At the International Medico-Legal Congress of 1889, Léteaud and DeCoust called attention to the need of more stringent regulation of the sale of narcotics by wholesale and retail druggists. It resulted in the passage of the following resolutions :

"Druggists and manufacturers of chemical and pharmaceutical products shall sell morphine and cocaine to pharmacists only, and must deliver it themselves.

"The retail pharmacist shall not be permitted to fill a prescription containing morphine or cocaine more than once, unless an order to the contrary has been written by the physician."

In this connection it may be of interest to note an opinion of the latest French writer on this subject—Dr. Régnier, of the Paris Academy of Medicine—whose work, “Chronic Intoxication from Morphine,” brought out last year, concludes: “Morphinism being so important as regards public health and morality, and especially as regards decrease of population, it would be wise that severe laws should forbid the illegal sale of morphine. The ease with which it can be procured, apart from medical advice, is the leading cause of the growth of morphinism.”

J. B. MATTISON.

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### TREATMENT OF ACUTE DYSENTERY BY SULPHATE OF MAGNESIA.

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*To the Editors of the Brooklyn Medical Journal :*

The *Lancet* of October 4, 1890, contains an interesting communication on the above subject of the treatment of dysentery at the outset by the sole use of repeated small doses of sulphate of magnesia, by Mr. A. W. D. Leahy, Surgeon in the Indian Medical Service, at Hyderabad, India, in which he gives a table of ninety-five cases treated by him in May, June and July, 1890. There were two deaths of patients who were moribund on admission to hospital. Ninety-three recovered, and the dysenteric character of the stools disappeared in an average of less than two days.

Mr. Leahy refers to the fact that ipecacuanha has long been recognized in India as the main reliance in the treatment of dysentery; but says that since his attention was directed to the value of epsom salts by a physician in England, who referred him to the statement in Bartholow's *Materia Medica and Therapeutics* that “the most efficient treatment of acute dysentery is by the administration of sulphate of magnesia,” he has used this method exclusively, and is satisfied of its superiority to all others.

Such corroborative evidence as is furnished by so many cases, generally severe, relieved so early, is a valuable addition to the statements you have already published in behalf of the saline method.

W. H. THAYER.

*Brooklyn, Jan. 9, 1891.*

## MISCELLANEOUS.

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### THE AMERICAN PUBLIC HEALTH ASSOCIATION.

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The Eighteenth Annual Meeting of this Association was held at Charleston, S. C., Dec. 16-20, 1890. While the attendance was not large, it was characterized by the presence of men from all parts of the country, including Canada and Mexico. Brooklyn was represented by Drs. A. N. Bell, John Griffin, J. Fred. Moore, A. L. Gihon, U. S. N., Delavan Bloodgood and J. H. Raymond. The following papers by Brooklyn representatives were presented: "The Artesian Wells and Underground Drains of Charleston," by A. N. Bell, M.D.; "The Treatment of Sewage by Precipitation and Sedimentation," and "The Sanitary Treatment of Stagnant Fresh-Water Lakes near the Coast," by J. H. Raymond, M.D.

The following officers were elected for the ensuing year: President, Frederick Montizambert, M.D., Canada; 1st Vice-President, T. F. Wood, M.D., North Carolina; 2d Vice-President, H. B. Horlbeck, M.D., South Carolina; Secretary, I. A. Watson, M.D., New Hampshire; Treasurer, J. B. Lindsley, M.D., Tennessee.

The next meeting will be held at Kansas City, Mo.

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### NEW YORK STATE MEDICAL ASSOCIATION.

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The Seventh Annual Meeting of the Fifth District Branch of the N. Y. State Medical Association will be held in Brooklyn on Tuesday, May 26, 1891. All Fellows desiring to read papers will please notify the Secretary, E. H. SQUIBB, M.D., P. O. Box 94, Brooklyn.

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### THE KINGS COUNTY MEDICAL ASSOCIATION.

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The Thirty-fifth Regular Meeting of this Association will be held in Merzler's Building, 315 Washington Street, over the Post Office, February 10th, at 8.30 P.M. Dr. William McCollom will read a paper on Phthisis Pulmonalis.

All regular practitioners of medicine and medical students are invited to attend the meetings and participate in the discussions, and to remain as guests of the Association after the meeting.

## BROOKLYN VITAL STATISTICS FOR OCTOBER, 1890.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population, estimated Oct. 1, 1890, 880,255	The number of Births reported was .....	1242
In the month of Oct. there were 1511 Deaths, the rate of mortality being 20.21 per 1000 of population.	The number of Marriages reported was .....	553
	The number of Still-births reported was .....	92

The mortality by classes and by certain of the more important diseases was as follows:

<i>Causes:</i>	
1. Zymotic.....	292
2. Constitutional.....	336
3. Local.....	706
4. Developmental.....	128
5. Violence.....	49
Measles.....	6
Croup.....	34
Diphtheria.....	57
Scarlet Fever.....	29
Typhoid Fever.....	24
Whooping-Cough.....	30
Cerebro-Spinal Meningitis.....	6
Malarial Diseases.....	20
Diarrhoeal Diseases (all ages).....	58
“ “ (under 5 years).....	43
Phthisis.....	190
Bronchitis.....	77
Pneumonia.....	132
All Respiratory.....	233
Bright's Disease.....	43
Puerperal Diseases.....	18
Old Age.....	25
Suicide.....	10

*Reported Cases:*

Diphtheria.....	133	Measles.....	60
Scarlet Fever.....	167	Typhoid Fever.....	80

Deaths by sex, color and social condition were as follows:

Male.....	785	Native.....	1035
Female.....	726	Foreign.....	476
White.....	1489	Married.....	437
Colored.....	22	Single.....	895
Widows, Widowers, and not stated.....		179	

Still-births, excluded from list of deaths, were as follows:

Males.....	48	} Total.....	92
Females.....	44		

Deaths in public institutions.....	127	Homicide.....	1
Deaths in tenement houses.....	497	Suicides.....	10
Inquest cases.....		123	

*Age Periods:*

Deaths under 1 year.....	373	Total deaths, 5 to 20.....	121
“ “ 5 years.....	224	“ “ 20 to 40.....	289
Total deaths under 5 years.....	597	“ “ 40 to 60.....	264
		“ “ 60 and upwards.....	240



Certain foreign and American cities show the following death-rate for the month of October :

Brooklyn.....	20.21	Vienna.....	18.80
New York.....	19.53	Paris.....	18.92
Philadelphia.....	16.54	London.....	17.30
Berlin.....	24.58	Glasgow.....	21.16
Dublin.....			19.08

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## BROOKLYN VITAL STATISTICS FOR NOVEMBER, 1890.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

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Population, police census, Nov., 1890,	853,945	The number of births reported was	1208
In the month of Nov. there were 1462 deaths, the rate of mortality being 20.83 per 1000 of population.		The number of marriages reported was	619
		The number of still-births reported was	118

The mortality by classes and by certain of the more important diseases was as follows :

### *Causes :*

1. Zymotic.....	278	Malarial Diseases.....	20
2. Constitutional.....	263	Diarrhœal Diseases (all ages).....	25
3. Local.....	752	"    "    (under 5 years).....	17
4. Developmental.....	104	Phthisis.....	164
5. Violence.....	65	Bronchitis.....	77
Measles.....	6	Pneumonia.....	185
Croup.....	44	All Respiratory.....	297
Diphtheria.....	64	Bright's Disease.....	33
Scarlet Fever.....	29	Puerperal Diseases.....	11
Typhoid Fever.....	44	Old Age.....	29
Whooping-Cough.....	17	Suicide.....	13

### *Reported Cases :*

Diphtheria.....	148	Measles.....	129
Scarlet Fever.....	174	Typhoid Fever.....	100

Deaths by sex, color, and social condition, were as follows :

Male.....	788	Native.....	951
Female.....	674	Foreign.....	511
White.....	1439	Married.....	423
Colored.....	23	Single.....	817
		Widows, Widowers, and not stated..	222

Still-births, excluded from list of deaths, were as follows:

Males.....	63	} Total.....	118
Females.....	55		
Deaths in public institutions.....	143	Homicide.....	1
Deaths in tenement houses.....	435	Suicides.....	13
Inquest cases.....	145		

*Age Periods:*

Deaths under 1 year.....	285	Total deaths, 5 to 20.....	138
“ “ 5 years.....	231	“ “ 20 to 40.....	281
Total deaths under 5.....	516	“ “ 40 to 60.....	269
		“ “ 60 and upwards.....	258

Certain foreign and American cities show the following death-rates for the month of November:

Brooklyn.....	20.83	Vienna.....	18.58
New York.....	20.97	Paris.....	21.09
Philadelphia.....	17.54	London.....	20.93
Berlin.....		Glasgow.....	23.50
Dublin.....			22.95

## COMPETITIVE EXAMINATION OF CANDIDATES FOR SUPERINTENDENT OF STATE HOSPITALS AND ASYLUMS.

An open competitive examination of candidates for Superintendent and First Assistant Physician in any of the State hospitals and asylums will be held at the rooms of the Civil Service Commission, Albany, N. Y., Thursday, March 5, 1891, commencing at 10 o'clock A. M.

A candidate for the position of Superintendent must be a citizen of the State of New York, at least thirty years of age, and have had at least five years' actual experience as a physician in a hospital for the insane.

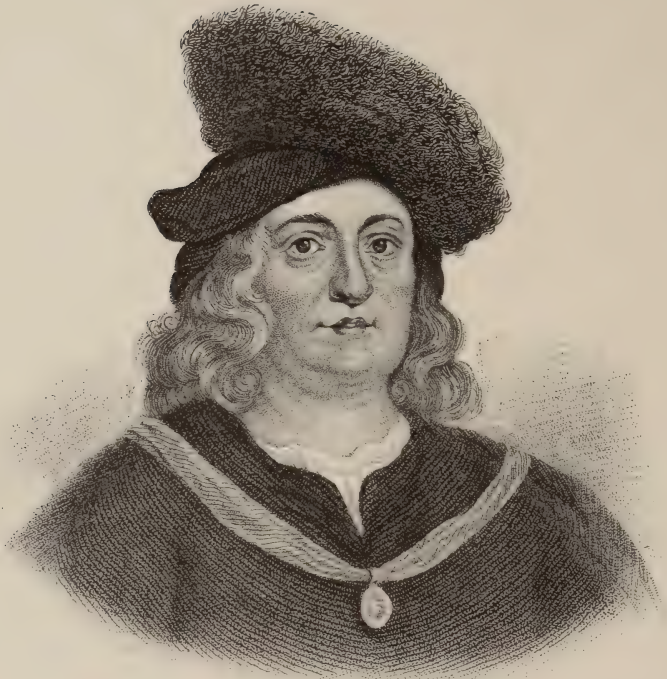
A candidate for the position of First Assistant Physician must be a citizen of the State of New York, at least twenty-five years of age, and have had at least three years' actual experience as a physician in a hospital for the insane.

Application blanks may be had by addressing the Secretary of the New York Civil Service Commission, Albany, N. Y.

JOHN B. RILEY,  
Chief Examiner.

Albany, N. Y., Jan. 14, 1891.





PHILIP AUREOLUS THEOPHRASTUS PARACELSUS BOMBASTUS AB HOHENHEIM.

His disciples added to this unwieldy title : " Founder of the modern practice of medicine ; " " The prince of physicians, and philosophers, by fire ; the Trismegistus of Switzerland ; reformer of chemical philosophy ; Nature's faithful secretary ; master of the elixir of life, the philosopher's stone, and great monarch of chemical secrets." (" Lives of the Adepts," London, 1814, p. 52.)

No man in his time had more adversaries, and none had more zealous disciples.

According to Van Helmont, " He was the forerunner of true medicine, God-sent and armed with knowledge, and his excellent cures put all Germany into commotion."

His enemies speak of him as " an ignorant boaster," who " lived like a hog, looked like a carter, found his chief pleasure in the society of the lowest and most debauched of the rabble, was drunk the greatest part of his life, and composed all he wrote in this condition."

Undoubtedly, according to our professional standard, he was a boasting quack ; but he still has the merit of introducing clinical remedies into medicine and of combating very vigorously the prejudices of the Galenical physicians against the productions of the laboratory.

In 1526 he was appointed Professor of Physic and Surgery in the University of Basle, and commenced his course of lectures by publicly burning the works of Galen in a brass pan with sulphur and nitre.

The majority of the physicians of his day were followers of, and believers in the humeral pathology of Galen, and the systems of the ancients, which had been handed down from Hippocrates, and revered with superstitious awe for more than two thousand years. These he rejected with the most unmitigated scorn and contempt. In its place he proposed a system of his own, which we have not space to describe.

His medical skill consisted principally in the bold administration of some powerful remedies which had been heretofore thought too dangerous to be used, particularly opium, a drug with which, it is obvious, he would be able in many instances to afford great and speedy relief.

Antimony and mercury were also medicines which he liberally prescribed, and he used various preparations of them of the most active kind.

He deserves the praise, however, of having been one of the first to employ mercury for the cure of syphilis.

He was born near Zurich, in Switzerland, in 1493, and died in Salzburg in 1541.

His works were very voluminous ; a biographer says he wrote more than he ever read. The writer is the possessor of one of the most complete editions, in twelve volumes (bound in three), published at Frankfurt in 1603.

THE  
BROOKLYN MEDICAL JOURNAL

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*Published Monthly under the supervision of the Medical Society of the County of Kings.*

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EDITORS:

JOSEPH H. RAYMOND, M. D.,

FRED. D. BAILEY, M. D.

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*ORIGINAL ARTICLES.*

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UPON SOME OF THE DANGERS OF IMMEDIATE SUTURING IN CERTAIN CASES OF FRACTURE OF THE PATELLA.

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BY GEO. RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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Read before the Medical Society of the County of Kings, Oct. 21, 1890.

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During the past eight years I have performed the operation of suturing fracture of the patella thirteen times. The first case perished from carbolic acid intoxication, the evident cause of the patient's susceptibility to the influence of the antiseptic agent being a diseased condition of the kidneys.<sup>1</sup> The operation of arthrotomy as undertaken in this case was justified by the occurrence of a hæmarthrosis of the knee, resulting from a rupture of the inferior internal articular artery, in which the tension from the combined effused synovial fluid and persistent hæmorrhage into the joint, demanded that some more decided measures of relief other than the provisional and tentative aspiration and elastic pressure at first employed should be undertaken. The death in this case was due to an over-zealous application of the antiseptic principle rather than from the failure of a well and judiciously applied aseptic effort, else I should have hesitated long before placing both the life and limb of another patient in peril from an attempt to suture a fractured patella.

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<sup>1</sup> Annals of Anatomy and Surgery, Vol. V., 1882, p. 276.

Two of these thirteen fractured patellæ occurred simultaneously in the same individual, and resulted from a fall from a height of about twenty-five feet. Although the fractures were not compound, as one might expect from the fact that he struck upon his bent knees, yet they were comminuted and the surrounding parts were very much contused. The right patella was broken into four, and the left into three fragments. Bandages had been applied to both knees prior to coming into the hospital, and these were permitted to remain until I saw the patient, seven hours later. At this time there was apparently no effusion whatever into the joints, and I decided to perform the primary operation upon both patellæ. Suturing was resorted to at once, every precaution being taken to insure perfect asepsis. In spite of this, however, extensive suppuration took place, this commencing, not in the joint itself, but in the thigh upon both sides. The capsule of the joints, which had been accurately closed by separate suture, united perfectly, and the drainage-tubes remained free from discharge of pus; the joints washed out perfectly clear when irrigated. I was compelled to make extensive and free incisions in both thighs, these giving vent to broken-down blood clot and sloughy cellular tissue, as well as considerable pus. Again and again these were separated, but the process of infectious inflammatory action did not cease until at least half a dozen large drains had been placed in each limb. The favorite site of the suppuration seemed to be in the region of and above the internal condyle, yet the joint itself was the very last to become invaded, and the outer aspect of the thigh did not escape entirely. In the right limb an accumulation of pus formed on the inner side of the leg, just below the head of the tibia, and no communication existed between this depot and either of the others, the joint or the line of incision. In fact, a characteristic of this exceedingly unfortunate condition resided in the marked tendency of the infection to spring simultaneously from several points which certainly had no direct communication with each other.

A well-marked feature in this case was the occurrence of extensive ecchymosis of both thighs, which became plainly visible about the seventh day following the accident, although about the knee-joint itself it appeared much earlier. This extended well up toward the brim of the pelvis and upon the buttocks.

By dint of persistently opening up and draining each point of infection and suppuration as it occurred, I finally succeeded in bringing this case to a favorable termination, albeit a more than usual amount of ankylosis followed. Attempts to move the knee-joints slightly under an anæsthetic were partially successful, but the patient's resources of good nature were finally exhausted; he became disheart-

ened, and was discharged from the hospital at the end of the third month for insubordination. He was a young and vigorous mechanic, and, upon examining him about six months afterward, I found that perfect union had taken place and that he had limited motion of both joints; this latter was just sufficient to enable him to go up and down stairs. There was present in all respects a decided improvement upon the condition existing when he left the hospital, and I have no doubt that a still more favorable functional result will be obtained finally in this case.

The next case was that of a man who fell from a step-ladder. The fall, in addition to fracturing the patella, likewise produced a fracture of the tibia and fibula in the lower third of the same limb. Here, from the presence of contusions in the neighborhood of the knee, it is probable that the injury to the patella resulted from the application of direct violence also. He was brought to the hospital by the ambulance, with a provisional splint applied to the fracture of the leg, the bandages of which extended to the thigh and included the knee-joint. There was present a remarkably slight amount of effusion in the joint itself, and, although the contusions present were sufficiently pronounced to impel me to hesitate, yet I finally decided to operate.

Immediate suturing of the fractured patella was resorted to, every possible precaution against infection being taken. Extensive suppuration of the thigh manifested itself, however, and only free incisions and drainage persistently resorted to finally saved this man his limb, and perhaps his life. After long weeks of tedious and exhausting suppuration, he left the hospital with the wounds healed and with slight movement in the knee-joint.

The third case was that of a man who received a blow upon the knee-joint from the kick of a vicious cow. In this case no bandage was applied, but a remarkably slight amount of effusion within the knee-joint had taken place during the eight hours intervening between the reception of the injury and the arthrotomy and wiring of the patellar fragments. A single point of suppuration upon the internal aspect of the thigh manifested itself in this case; this was promptly incised and drained. In this, as in the two preceding cases, the suppuration did not have its origin in the knee-joint itself, but rather from some point along the plane of the vastus internus muscle, outside the apparently completely closed capsule. In its incipiency it was purely an extra articular inflammation and suppuration. This patient fared much better than either of the others, yet he was a source of much anxiety to me until finally dismissed with a fairly useful limb.

In the fourth case the injury was received during an attempt on the part of the patient to save himself from falling while stepping off from

an unexpected elevation. In this case, without doubt, the fracture was the result of violent muscular effort. Rapid effusion occurred within the joint, which disappeared during the night under the application of a Martin's elastic bandage to the knee-joint; the fragments which had been widely separated the previous afternoon were found the following morning to be closely approximated. The joint was opened and the fragments secured by a silkworm-gut suture. All seemed to go on well as far as the joint itself was concerned, but on the third day the rise of temperature, as in the other cases, showed that something was wrong. An investigation showed swelling, some discoloration, which subsequently deepened, and tenderness along the vasti muscles; this increased rapidly, and incisions in the thigh gave exit to broken-down blood clot and pus. This was repeated until five different accumulations had been evacuated and drained. The joint itself became subsequently infected, and after a severe struggle the patient's natural vigor triumphed, and he left the hospital at the end of three months with the knee completely ankylosed.

A fifth case was one of compound fracture, the result of direct violence. The man received the calk of a horseshoe directly upon his right patella from the kick of an animal which he was engaged in shoeing. The wound was small, and the fracture was oblique. From this circumstance the bone was not drilled, but catgut sutures were simply placed through the aponeurotic structures, which had not been driven between the fragments, to steady the latter. Drains were placed at the site of the lateral ligaments. There was no bruising of the surrounding structures, the point of the calk striking fairly upon the anterior surface of the patella, the entire force of the blow being there expended. In this case infection took place in the joint itself, no sign of the suppurative process being at any time noticeable in the thigh beyond the line of the synovial lining. Re-opening of the original wound and irrigation of the joint, together with packing the latter with iodoform gauze, sufficed to bring about final healing. The ankylosis was unfortunately only too complete, but one cannot help but be comforted by the reflection that, in this case at least, the result was due to infection which reached the joint before he fell into the surgeon's hands, and that in pre-antiseptic times the limb would have been condemned for amputation at once.

These unfortunate experiences may be somewhat offset by the addition of three cases in which the primary suture was employed in simple uncomplicated fractures with most brilliant success. In two of these the effusion was copious and rapid, and the provisional dressing applied by the ambulance surgeon was removed within the first few



hours, owing to the pain incident to the pressure of the bandage as the swelling increased. In these the results were all that could be desired, and the patients were discharged cured, with some motion of the knee-joint at the end of eight, seven and nine weeks respectively.

A third case was referred to me by my friend Dr. Geo. W. Baker, of this city, and the operation was done in the patient's rooms and under conditions not usually considered the most favorable for aseptic work. In this case there had been considerable effusion within the joint, which had slowly subsided under an evaporating lotion when I saw him upon the fifth day following the accident. The injury had occurred by muscular contraction, and there were no contusions visible in the neighborhood of the joint. The fragments were brought into close apposition and there secured by means of a piece of rather stout piano-wire. Under but two dressings the wound healed entirely, except where the ends of the wire projected; the small opening remaining upon the removal of the metal suture closed under a third dressing. In four weeks all dressings were discarded, and after two weeks of further rest of the limb, passive motion was resorted to for the purpose of obtaining slight motion of the joint, after which he returned to his occupation as a gateman at one of the ferries. Progressive improvement in the ability to flex the limb followed his return to work, and within three months thereafter he was able to kneel. In six months he could almost touch the heel of the injured side to the buttock, and could stand upon that leg alone and hop clear of the ground—a most severe test of the integrity of the limb following this injury.

In still another case of wiring of the patella—one in which the bone had been first broken more than twenty years before, and in which an accident three days prior to coming under my care had resulted in a forcible tearing apart of the fragments—considerable anxiety attended the after-treatment. In this case a considerable effusion had occurred within the joint, which did not disappear upon the application of a bandage, and which required five days' constant and unremitting treatment by means of an evaporating lotion before the position and condition of the fragments could be made out. Infection from a point of ulceration due to pressure took place on the fifteenth day, and the subcutaneous cellular tissue about the joint became the site of extensive suppuration. The deeper planes and inter-muscular spaces of the thigh, however, escaped entirely, and at no time was there any considerable elevation of temperature nor the grave constitutional condition which was such a pronounced feature in the cases mentioned in the first series, although the upper fragment became carious, and was subsequently removed.

In another case of refraction, occurring in an ex-cavalryman, who had been discharged from the United States service on account of the disability which followed fracture of the patella, although the union had been such that, according to the patient's statement, the separation of the fragments could scarcely be made out, the secondary operation was practised. The patient was transferred from another hospital, and when he came under my care nearly a fortnight had elapsed since the reception of the injury. In this case the fracture resulted from muscular contraction; but a slight effusion had been present from the beginning, and the joint had been firmly bandaged from the start. I applied the wire suture on the sixteenth day, and a most happy result followed. In three subsequent cases of secondary suture, done at periods varying from six months to two years following the reception of the injury, in which the operations were undertaken for marked disturbances of function, equally fortunate results followed.

A case of compound comminuted fracture of the patella may be here mentioned, in which the primary suture was applied, and in which, thanks to the careful and efficient antiseptic irrigation and protection of the wound as practised by my house surgeon from the very moment of the patient's coming into his hands, a perfectly aseptic course of healing followed. Barring the complication of a subsequent necrosis of the upper fragment, which resulted from the violence to which it had been subjected at the time of the infliction of the original injury, this case likewise pursued a most satisfactory course, and a perfectly useful limb resulted. In this instance a larger amount of blood and synovia were found within the joint when the wound at the site of the patella was enlarged and the cavity of the joint exposed. The entire force of the blow, however, had been expended upon the anterior surface of the patella, and no contusions were found anywhere else in the neighborhood.<sup>2</sup>

A review of these cases suggests some very pertinent inquiries. These relate, first, to the persistency with which the cases exposed to fresh violence developed infectious inflammatory complications; second, to the fact that, in these cases, the primary points of infection occurred in the deep muscular structures of the thigh, and not in the knee-joint itself, the latter becoming infected secondarily; the immunity, thirdly, of the structures of the thigh from infection when these were uninjured, even in the case in which direct infection of the joint itself occurred and suppuration of the latter followed; fourth, the fact that when excessive traumatism and infection were both absent,

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<sup>2</sup> *Annals of Anatomy and Surgery*, 1885, vol. ii., p. 246.

a remarkably rapid cure followed, with a useful limb; fifth, the perfectly undisturbed course which those cases pursued which were sutured as a secondary method of treatment. Further, attention is particularly called to the peculiar fact that in all of the cases in which no distention of the joint cavity occurred, as well as in those in which, effusion having taken place, the application of a firm bandage was followed by its rapid disappearance, prompt and decided infection followed the operation, with resulting abscess of the thigh; and on the other hand, the immunity from septic complications in those cases in which no amount of bandaging that could be borne by the patient sufficed to prevent the occurrence of effusion within the joint cavity or led to its rapid diminution.

In consideration of the facts above set forth, I have been led to materially modify my views concerning the advisability of wiring of the patella as a primary method of treatment in fracture of this bone. In a former contribution upon this subject I predicted that in the hands of skilful surgeons this would become the most approved method of treatment.<sup>3</sup> In view of the experience of later years with this operation, I am led to declare that, in my judgment, there exist some positive contra-indications to the operation as a primary procedure, and that these relate mainly to the occurrence of a rupture of the joint capsule, particularly at its upper limit, or that portion which lies beneath the vastus medius or rectus muscle, and to extensive contusions in the neighborhood of the joint. A glance at the anatomy of the knee-joint and contiguous structures will serve to demonstrate the ease with which the first mentioned of these contra-indications may enter as a factor in a given case:

The cavity of the knee-joint forms the largest synovial sac in the body. It follows the capsular investment of the joint, this latter being made up anteriorly by the quadriceps extensor tendon, the ligamentum patellæ, and the patella itself. It forms a large cul-de-sac as it bulges upward beneath the extensor tendon in front of the femur, this extending some distance beyond the line of the articular surface of the latter. Even above the point to which this cul-de-sac reaches in the thigh there frequently is found to exist a large bursa, interposed between the tendon and the bone, and which communicates directly with the cavity of the joint.

The vastus internus, together with the crureus, inasmuch as they are practically but one muscle, constitute the smaller portion of the great quadriceps extensor. It arises from nearly the entire length of the internal, anterior and external surfaces of the shaft of the femur; its

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<sup>3</sup> *Annals of Surgery*, vol. v., 1887, p. 518.

attachment is only limited above by its aponeurotic connection with the lower part of the line which extends from the inner side of the neck of the femur to the linea aspera. It is also attached to the entire length of the linea aspera at its inner side. This muscular plane, it will therefore be seen, serves as a transverse partition, so to speak, between the anterior and posterior structures of the thigh for at least three-fourths of that portion of the bone which lies below the attachments of the capsule of the coxo-femoral articulation. The lower fourth of the anterior surface of the femur is separated from that portion of the vastus internus called the crureus by the intervention of the synovial membrane of the knee-joint. It will thus be seen that the cavity of the knee-joint is really continuous in an upward direction upon the anterior surface of the femur for one-fourth of the entire length of the latter, and terminates upon the plane of the attachment of the vastus internus. The effect, therefore, of a rupture of this upper recess of the knee-joint would be to permit of the passage of serum and blood from the latter upon this muscular plane, and thence upward until the aponeurotic attachment at its upper limit is reached. At this point the extravasated fluids would find their way to and upon the glutei muscles.

A sufficient explanation of the occurrence of infection is to be found in the fact that there occurs an extravasation of the effused fluids which follows immediately upon the receipt of the injury into the space between the vastus internus and the bone, in those cases in which the upper recess of the joint cavity is ruptured. The opening of the knee-joint in these cases is almost certain to produce suppuration in a locality in which it is almost impossible to accomplish complete disinfection, by opening up a direct route of infection into the depths of the thigh along the plane of the vastus internus muscle, between this muscle and the femur. Following the course of the muscle downward, the infection process finally reaches the patella and the wound itself, in spite of every care. The application of the dressings and bandages would tend to further the extension of this infection by forcing the effused fluids from the joint cavity through the rent in the upper recess, instead of permitting them to escape through the drainage tubes placed in the joint for that purpose.

To the researches of a well-known surgeon of Jena<sup>4</sup> we are indebted for the first suggestion of a rational explanation of these unfortunate results of opening the knee-joint, where every provision against sepsis would seem to have availed nothing. This observer instituted a series of experiments to determine the resistance which the capsule of the knee offered to hydrostatic pressure. With the limb in the extended position,

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<sup>4</sup> Prof. Riedel, *Centralblatt f. Chirurgie*, No. XII., 1890.

in the cadavera of strong males, 200 cc. m. of fluid, under a pressure of from 3.5 to 4 metres, produced rupture of the upper recess of the joint capsule. In this connection it may be said that probably a much less pressure may be sufficient to produce this effect in the living individual, from the well-known fact that, where rigor mortis is well marked, an additional support is furnished this particular portion of the joint cavity.

Subsequently to these observations Riedel had an opportunity to verify his views regarding the possibility of the occurrence of this accident. During an attempt to suture a fractured patella as a primary operation, the patient died upon the table. An immediate examination of the parts revealed the existence of two points of perforation of the upper recess of the joint and an extensive hæmorrhage between the vastus medius and the bone. The impression that the first case was but a clinical curiosity was dispelled by the occurrence of a second case in the practice of the same surgeon: A male, aged 54, had received a severe blow upon the patella. There was considerable swelling of the thigh, which, when the man was received into the hospital eight days after the injury, had extended to the pubes; later on this reached the outer portion of the thigh, and finally to the glutei. This was undoubtedly a case in which the joint capsule had been ruptured and the subsequent hæmorrhage and effusion had found its way from the site of the original injury, infiltrating themselves along one of the muscular planes of the thigh.

A large amount of extravasation and consequent swelling of the thigh need not necessarily exist in these cases of rupture of the upper recess of the knee-joint; indeed, the surgeon's attention would scarcely be attracted by any change in the thigh itself. But a condition which should never fail to excite suspicion is to be found in the occurrence of but slight swelling and distention of the joint capsule—or, this having taken place, the fact that it has rapidly disappeared. On the other hand, the increase of pain and distention upon the application of a bandage would be an indication that the joint cavity is still intact; here, providing there be no other contra-indications present, the primary operation may be resorted to without delay, and, in proper hands, with almost positive safety.

In exceptional instances the extravasated fluids may find their way to the popliteal space; but as the vasti have their points of origin high up, so the hæmorrhage will appear at the edge of the pelvis, for the reason that the spaces in the muscular mass are more numerous than in the compact structures below. The discoloration of the skin, due to the hæmorrhage and extravasation, will first make its appearance upon the inner side of the thigh, later on appearing at the outer

side and upon the pelvis, and in the course of time reaching to the leg.

That this complication need necessarily be a result of the distention occurring after the fracture is open to some doubt. There is reason for believing that it may be produced by the same violent muscular effort which is an etiological factor in the vast majority of cases of fracture of the bone.

A striking proof of the occurrence of rupture of this upper recess of the synovial cavity, and the readiness with which effused fluids may pass beyond the limits of the joint itself and become extravasated along the muscular plane above alluded to, is occasionally seen in the rapidity with which these effusions may be made to disappear after severe injuries to the knee-joint, by the simple application of an elastic bandage. Writers have mentioned instances in which a single application of a rubber bandage has resulted in the total disappearance of the effusion in a few hours and a restoration of the normal appearance of the joint. In no other joint can this result be produced, nor yet in the knee-joint in cases in which the effusion is due to other causes; there is no reason for believing that, in this joint, pressure would hasten the resorption of the fluids in this extraordinarily rapid manner. As a matter of fact, resorption does not occur at all; what really happens is a forcing of the fluid from the cavity of the knee-joint through a rupture of the latter at the point indicated, or elsewhere, and into the neighboring inter-muscular spaces. True, a distention of the upper recess may occur in which no rupture has taken place, if the effusion in the cavity be not large; while the elastic bandage remains applied, the impression may be given that the effused fluids have undergone resorption. But these are not the cases in which such apparently brilliant results have been obtained, for it is found that upon removal of the rubber bandage the distension of the joint recurs. It is not to be denied that the application of the elastic bandage may be instrumental in producing resorption of the fluids both in the joint and upon the plane of the vastus internus muscle; that it occurs, however, other than by the usual and slow process, is open to doubt.

These facts will enable us to explain the untoward results in those cases in which the symptoms pointed to the occurrence of this complication. In addition to this condition there is another positive contra-indication to the application of the suture to the fragments as an immediate method of treatment. I refer to occurrence of extensive and severe contusions in the neighborhood of the joint itself. It is a well-known fact among surgeons that where structures have been the site of extensive injury, even though these may be highly organized, the lessened vitality of the part lessens its resistance to infection. The

question whether such a condition as rigid and absolute asepsis in an open wound really exists or not has been frequently discussed, and it is more than probable that a typically aseptic wound is of rare occurrence. The question is simply one of dosage, so far as the entrance of infectious material is concerned, and the local condition of the tissues themselves and their powers of resistance will frequently turn the scale in favor of or against the patient, rather than the efficiency of the germicides employed, or the activity of the microbes which have run the gauntlet of the antiseptic dressings. With every effort brought to bear to prevent infection, an infinitesimal portion of the morbid agent may find its way into structures which from their damaged condition may be entirely powerless to resist their noxious influences; to say nothing of the fact that the increased heat, together with the presence of a greater amount of fluid within the connective-tissue spaces and the opening up of these latter to a greater or less extent, undoubtedly favors not only the primary occurrence of infection, but the rapid spread thereof. It therefore becomes a question for the surgeon to determine, in each individual case, as to whether or not he should expose his patient's tissues to even the slightest infection, in this locality, when these may not be in the best possible condition to resist the same.

This brings us naturally to the consideration of the question of the propriety of postponing the operative interference to a period when it may become one of almost positive safety to the patient. It will be scarcely claimed by even the most enthusiastic advocate of the operation of suturing the fractured patella that the procedure is urgently called for in the very beginning of the treatment. With the exception of those rare cases in which arthrotomy is demanded because of the occurrence of an extreme hæmarthrosis complicating the patellar injury, as happened in my first case, there is no need of undue haste in interfering. Fully a fortnight may be allowed to elapse, and even longer, with the chances altogether in favor of serving the patient's best interests by such delay; on the other hand, by adopting the opposite course, the lives and at the least the limbs of those entrusted to our care may be lost by opening up and exposing tissues whose condition is such as to suffer severely from a comparatively small dose of infection. The cases above detailed, in which the operation was performed after a delay of from fourteen days to six months, when compared with those in which immediate interference was resorted to, are strikingly suggestive of the propriety of waiting.

## THE QUESTION OF EARLY OPERATION IN DISEASE OF THE VERMIFORM APPENDIX.

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Perhaps no subject is at present of more general interest to the physician and surgeon than the question of operation in disease of the vermiform appendix. Much attention has been paid during the past few years to both its pathology and treatment, but there yet remains room for discussion upon the unsettled points connected with the management of these cases. For it is still true, that while various indications for surgical interference have been given by a number of writers, there is in reality considerable difference of opinion in the profession as to what cases demand early operation, and what cases should be dealt with in a more conservative way.

Although a large majority of the patients submitted to early operation have recovered, a study of their histories will convince one that these good results do not prove the necessity for such prompt interference in all cases of appendicitis, even of those with fairly well marked symptoms. For in some of these patients nothing more serious has been found than a mild or moderately severe catarrhal inflammation of the appendix, and the experience of numerous observers has shown that a considerable proportion of similar cases make good and permanent recoveries without any operation whatever. I believe that a majority of physicians, if not of surgeons, will testify to the truth of this statement. Bearing on this point we have the statistics of Fitz, 36 per cent. of all his patients with appendicitis recovering without suppuration and without surgical aid. Numerous autopsies in which the condition of the appendix has been carefully noted would also show that it is more frequently the seat of mild grades of inflammation than is generally supposed. Toft states that in 300 consecutive post-mortem examinations, where death had resulted from various causes, 36 per cent. showed previous or present disease of this organ. Hektoen found that in 280 autopsies, 15 per cent. gave evidence of having had some inflammatory disease of the peritoneal investment of the appendix, or of its immediate vicinity, from which recovery had taken place, no reference being made to any pathological changes that may also have been present within the appendix in the cases ex-



amined. According to Bridge, "one-fourth at least of all post-mortems show recoveries from previously existing inflammation, or other disease of the appendix." It is fair to presume that in at least the majority of these cases a diagnosis of appendicitis could have been made by careful examination at the time such inflammation occurred. These facts are entitled to consideration in advising early operation, or in estimating the probable value of such interference.

It has been argued that, in view of the uncertainty of diagnosis in many of these cases, early exploratory laparotomy is a proper procedure whenever there is evidence that the appendix is in trouble. Is laparotomy, then, so absolutely safe, even in the hands of the most experienced that it should be thus advised for diagnostic purposes within the first few hours of an attack? Ought not the surgeon to wait until reasonably certain, from a careful consideration of the symptoms present, that operation is demanded for purposes other than exploratory, and that it will promise a better prospect of recovery than a more expectant treatment? It is urged that such delay as this course necessitates may sometimes render subsequent operation unsuccessful when the patient might otherwise have recovered if laparotomy had been performed in the incipiency of the disease. True! but is not this better than to submit a patient, thus early, to a positive danger for the purpose of avoiding only a possible one. As well for the patient, and far better for his advisers, that he should die from disease, when operation in spite of their best judgment was too long deferred, than that he should die from the effects of an operation itself too hastily and unnecessarily resorted to. To be caught on either horn of the dilemma would be unfortunate; but until a majority of surgeons experienced in laparotomy can agree that the operation carries with it no dangers whatever, this feature of the question should not be entirely ignored in deciding upon early interference. What most concerns the patient is not what special operation can be shown to give the most brilliant results in a large number of cases, but what will give him in his individual case the best prospect of a speedy and complete recovery with the least possible risk and suffering.

I do not wish to be understood as opposing early operation in suitable cases. Surely, enough has been learned in the last few years to convince even the most conservative that prompt surgical interference is demanded in a certain proportion, perhaps a majority, of patients with appendicitis, and gives the sufferer the best and possibly his only chance of life. But I wish to be understood as opposing operation for diagnostic or other purposes in the absence of symptoms indicating with reasonable certainty near or remote danger to the patient. It is true, as stated by different writers, that the symptoms do not always

enable us to accurately determine the extent and severity of the disease and the consequent danger that may threaten, but their careful consideration for one, two, or three days after the beginning of the attack, except in those rare cases of sudden perforation and septic peritonitis, will at least enable us to decide upon a line of action less frequently detrimental to the interests of the patient than if we promptly resort to laparotomy in all cases of appendicitis without regard to the character and duration of the symptoms present. But these should be watched from hour to hour and not at long intervals, for in the early recognition of those cases which should be submitted to surgical interference lies the patient's greatest safety.

I am led to make these remarks because the impression likely to be conveyed by some of the literature upon this subject is, that all cases of appendicitis, as soon as recognized, should, irrespective of their apparent severity, be submitted to laparotomy; whereas we know that a large number of cases make good and complete recoveries without any operative interference whatever; and it should be as much the duty of the surgeon to decide when not to operate, as when and how laparotomy should be performed.

In my own experience during the last two years I have met with three cases of appendicitis which, while well marked, have run a comparatively mild course. In one case there was a second attack, less severe, however, than the first. Of these patients two were females. In only one did the temperature go as high as  $102^{\circ}$ , and it remained at that point for only a few hours. In the others the highest temperatures noted were  $101^{\circ}$  and  $99.5^{\circ}$ . In no case did the pulse go above 100. Pain was in all the most prominent symptom. In two cases it was felt from the first in the right iliac fossa; in one it was at first more or less distributed over the abdomen, subsequently becoming localized in the neighborhood of the appendix. In one case pain was notably increased when upon the left side, the patient describing the sensation as a dragging or tearing kind referable to the region of the cæcum.

In all cases the seat of greatest tenderness to finger pressure corresponded to the point indicated by McBurney. In only one could any well-defined induration be made out, and this was in the patient whose highest temperature was  $102^{\circ}$ . Such may, however, have been present in another case and escaped detection, for this patient was obese. In one, some nausea was complained of for the first few hours, but there was no vomiting in any case. Tympanites was moderate in two patients, and well marked in one. In two, improvement in all the symptoms began on the second day. In the one in which induration was present a decided change for the better was not noticed until the third day. These cases all recovered under opium, rest and

hot fomentations. The one in which relapse occurred has been entirely free for four months from any symptoms referable to the appendix.

Three cases, two of them males, have also come under my observation after they had gone on to the formation of abscess. In one case a large enterolith was found to be the cause of perforation and the formation of a retro-peritoneal abscess. In the other two cases, also, the pus was evacuated without opening the free peritoneal cavity. In all the disease had been attended from its onset with pronounced symptoms. The dangers incident to the formation of such abscesses, and to such extensive and prolonged suppuration as occurred in all these cases, are too well known to need repetition; and although these patients recovered, it was after long and serious illness, and I believe that they passed through greater peril than would have attended early operation. I have not given the histories of these cases, because, unfortunately, it was impossible to obtain an exact record of them prior to the formation of abscess, the period in which an accurate account of their symptoms would have the most value in this paper, and because subsequently to that time their histories do not differ materially from those so often reported of similar cases.

Of cases demanding early operation at the time, or shortly before they came under my observation, I have met but two. One was a boy aged 17, seen with Dr. L. M. Fleming. In this case the first symptom was severe pain in the right iliac fossa, which the patient thought to be a colic, and delayed sending for his physician until the following day. I saw him fifty-six hours after the beginning of the pain, which was still present, although fairly well controlled by opium. Temperature  $101^{\circ}$ , pulse 108, respiration hurried. Abdomen distended. Right rectus the most tense. The most sensitive spot to finger pressure corresponded to McBurney's point. No localized tumefaction could be made out. The family would not entertain the idea of operation. The patient's symptoms continued to grow more alarming, and he died on the fifth day of peritonitis, induced by probable perforation of the appendix. The highest temperature noted in this case was  $102.5^{\circ}$ , but the pulse reached 160.

In the other case operation was permitted, but not until the sixth day.

The patient was a male, thirty-two years of age. Previous health excellent. On April 17th he noticed a slight pain in the right groin, which, however, did not keep him from business. The following day the pain became suddenly worse, and at the same time he had a severe chill. From a druggist he obtained some cholera mixture, which, however, gave no relief.

*April 19th.*—Two days from the beginning of his attack he sent for his physician, Dr. E. F. Pearce, to whom I am indebted for the accompanying history. The patient now complained of severe pain in the right iliac fossa. There was marked tenderness on pressure, and some tympanites; and slight induration could be detected in the neighborhood of the appendix. At 2 P.M. he had another severe chill, and several attacks of vomiting. Temperature  $102^{\circ}$ ; pulse 100.

*20th.*—Nervous disturbance marked. Patient irritable and at times incoherent. Pain and tympanites less. A well-defined elongated tumor could now be detected in the right iliac fossa. Bowels had moved freely during the night. Pulse 90, temperature  $102\frac{1}{2}^{\circ}$ ; chill in the afternoon.

*21st.*—Pulse 105, temperature  $103^{\circ}$ . Had a chill during the night.

On the morning of the 22d I first saw the patient with Dr. Pearce. The temperature at this time was  $102\frac{1}{2}^{\circ}$ , pulse 100. A well-defined tumor could be made out in the right iliac fossa. Tympanites moderate. Advised operation, to which, however, the patient and friends were averse.

*23d.*—Dr. William Gilfillan saw the case, and agreed with us as to the advisability of immediate operation. The patient's condition was so much worse than on the previous day, that the friends now readily gave their consent. He had been delirious for the greater part of the night, and two severe chills had occurred in the last twenty-four hours. Temperature  $104^{\circ}$ , pulse 110, and weak, abdomen more distended, and the tumor could be less readily made out.

Laparotomy by lateral incision at 4.30 P.M. Present, Drs. William Gilfillan, Pearce, Skerry, and H. Wallace. No fluid in abdominal cavity. No evidence of peritonitis except moderate congestion over the cæcum, and some fibrinous exudate along its inner border. The major portion of the tumor was seen to occupy the iliac fossa outside of the cæcum, though extending beneath and a little within its inner border. To the outer side, the peritoneal covering of the cæcum was continuous with that covering the tumor; in other words, the tumor was clearly retro-peritoneal at this point. To the inner side, the cæcum was firmly adherent to the parietal peritoneum through the medium of the exudate above mentioned. Percussion showed this mass to be tympanitic, and a hypodermic needle gave vent to a small quantity of fœtid gas. Keeping close to the ilium, I made a small opening into the tumor, through which opening the finger entered what appeared to be infiltrated cellular tissue, and not a distinct cavity. From this escaped some gas and a small quantity of extremely offensive and bloody serum, mixed with some feculent material, but no pus was seen. In removing this, no difficulty was experienced in protecting the peritoneal cavity.

The patient's condition was so bad that it was deemed unwise to make any further search for the appendix, and a drainage tube was introduced, iodoform gauze applied in the usual way, and the ordinary abdominal toilet made.

The patient did not rally, but continued to grow weaker and more delirious, and died thirteen hours after operation. Nausea and vomiting, which, however, was never feculent, were prominent symptoms and continued till death.

Post-mortem was made by Dr. Gilfillan. No pathological appearances in the abdominal cavity other than those noted at the time of operation, except the ordinary post-mortem changes. Upon breaking up the adhesions which bound down the cæcum, and these were quite firm--the appendix was found lying posterior to the intestine, and within the infiltrated area. It was completely gangrenous and contained two moderately large enteroliths. Perforation had taken place at its base.

Although a well-marked tumor was present in this case, and the operation was not done until the sixth day of the disease, I opened the abdominal cavity by the lateral incision, instead of endeavoring to reach the mass by Parker's method, and for the following reasons: The diminution in the prominence of the swelling to a greater extent than the increased tympanites would account for, and the marked and rapid change for the worse in the patient's general condition, gave reason to fear that perforation of the limiting wall of the tumor had taken place, and that a septic peritonitis was being initiated. In addition to this, the lower border of the mass was too far above Poupart's ligament to have been easily reached by the latter route.

Gangrene of the appendix from the presence of concretions impacted at or near its base, gradual perforation, the formation of protective adhesions around the appendix and along the inner border of the cæcum, escape of gas and fecal matter into the post-cæcal cellular tissue was the probable course of the disease. Whether the appendix in this case had a mesentery and the perforation occurred within it, or whether none existed and the post-cæcal cellular tissue was reached by ulceration through the parietal peritoneum, could not be determined.

Would the termination have been otherwise had operation been delayed in the expectation that a safe abscess would form and become approachable without entering the free abdominal cavity? I believe it would not. The degree of septic infection, as evidenced by the rapid failure of the patient's strength, was too great to permit such a favorable issue. The severe pain, vomiting, recurrent chills, variable temperature—now high, now only slightly elevated—and the nervous disturbance so characteristic of septic poisoning, were sufficient to mark

the case a serious one from the beginning. In view of the well-known fatality in such cases under the expectant treatment, and in view of the success that has already attended early operation, this case, in the writer's judgment, was one in which laparotomy on the second or third day of the disease was clearly indicated. The patient and friends were, however, so opposed to any such interference that operation was permitted only on the sixth day, when the patient was so weakened by prolonged septic poisoning that it was apparent to all that death must shortly occur unless surgical aid could afford relief.

I have here referred to and partially reported eight cases, with two deaths, a mortality of 25 per cent., about the same rate as that generally given for cases treated medically and by late operation. These would properly come under the same head, for in none was early operation, as we now understand the term, resorted to. It is true that they furnish only negative evidence in favor of early interference, but as such they may be of some value, for the results compare unfavorably with those obtained by early laparotomy.

While it is generally conceded that no fixed rules can be formulated that will be applicable to all cases, but that each must be judged to a certain extent upon its own merits, I would venture, in conclusion, to present the subject for your consideration in the following summary :

I. That the majority of those cases of appendicitis characterized by mild symptoms require no surgical interference unless such symptoms increase, or persist unabated, after the third or fourth day.

II. That the presence of slight induration, accompanied with moderate pain and tenderness and but little constitutional disturbance, does not necessarily indicate operation. Where, however, such induration continues to increase beyond three or four days, or there is an increase in the general symptoms by that time, operation will promise more than an expectant treatment.

III. That cases presenting, either from the first, or at any time in their course, marked constitutional disturbance, notably chills, a continued high temperature or a variable temperature, rapid pulse, vomiting and increasing tympanites, with or without the presence of tumor, demand operation as early as possible.

#### DISCUSSION.

DR. GILFILLAN.—I saw the patient to whom Dr. Rand refers, in consultation, and at the time symptoms were of a very aggravated type. It seemed to me from the condition of the abdomen that general peritonitis either had begun or was beginning. The tumor that could be felt in the right iliac region was less defined than on the previous

day, but could be perceived, and seemed to be as large as an orange. When it was opened, we were surprised to find no evidence of general peritonitis; the appendix did not come into view at all during the operation, and from the amount of bloody serum that escaped there was no evidence of pus. The question then was whether in that condition of the patient we should proceed to make a more elaborate operation and raise up the cæcum and look for the appendix, or leave matters as they were. Not finding any pus, we thought the better plan would be to rest at that point. We had difficulty in getting a post-mortem, but almost at the last moment we got permission to make it. As already stated, there was no appearance of peritonitis, and it was difficult to bring the appendix into view. The adhesions were so strong, binding down the appendix, that a degree of force was required that no surgeon would dare to use in the living subject, as some damage might have been done to the cæcum.

The appendix was gangrenous, about the size of the first joint of the little finger, and of a dark, dull, cherry red color. There were two small enteroliths, and one had a facet on it, showing there had been motion and attrition between them at one time. No pus was found in the post-mortem examination. The patient died some time during the night subsequent to the operation. It was evident that the patient died not from peritonitis, but from septic poisoning, and the question is whether the operation had anything to do with hastening his death or not. I think it may be concluded that without the operation there was no chance of recovery, and I think operation did not hasten death in the slightest degree. The symptoms of septic poisoning were very decided, and the operation was done under the idea that it afforded the only prospect of relief.

I would like to make one or two remarks in regard to appendicitis in general. Probably it is much more frequent than is supposed, and many of the apparent cases of colic are really cases of appendicitis. Many of the cases no doubt, with rest and quiet and warm applications, recover after a more or less prolonged illness. The difficulty in deciding as to whether a case should be operated on or not, is not in knowing whether it is an appendicitis, but what the cause is that produces the appendicitis. If we have a mild attack of inflammation in the cæcum, the chances are it will heal with rest and treatment. On the other hand, if it is caused by the introduction into the appendix of any foreign substance so as to interfere with the circulation, we are very apt to have either perforation or gangrene. This is not so infrequent as one ordinarily supposes. Some years ago I met with a very remarkable case, in a patient who had been subject to attacks of gall stone, and had recovered from them after two to five days. On one occasion she

had a very severe one, which passed off in two days, but in the course of thirty-six hours afterward she was taken with another kind of pain in the lower part of the bowels and got rapidly worse. She was at a distance, and was attended by a physician in the neighborhood for the first and second attacks, until it became severe, when I was called in in the middle of the night and found her moribund, and she died after an hour or so. The symptoms of peritonitis in that case were not marked, and her death was rather a surprise to me at the time. I insisted upon a post-mortem, and I found there was gangrene of the appendix which had sloughed away completely and there was a small gall stone—about the size of a date stone—embedded in the opening. It had come along the track of the intestine and become wedged in there and cut off the circulation, and gangrene resulted.

Now, these cases that depend for their symptoms on sloughing or gangrene of the appendix are necessarily fatal, I think, unless operation is performed. We can imagine that even with a sloughing appendix, if firm exudation confine it behind the peritoneum, there is the possibility of recovery without operation, but that it is a very slight chance.

In regard to the time of operation, of course a great deal depends upon the consent of the patient's friends, and it is some time before people can be educated up to the necessity of interference at an early point, in cases that at the beginning present nothing of a very aggravated type. Vomiting and pain are common to many diseases that are not necessarily fatal, and it is difficult for the lay mind to grasp the necessity for early operation; still, every case that is successfully operated upon forms an argument and prepares people for submitting to an operation of that kind if it is required. A careful study of these cases is necessary to arrive at what is the cause of the appendicitis, and upon that, I think, actually hinges the necessity and propriety of operation. If it is produced from a slight inflammatory condition, or irritation of the mucous membrane, or anything of that kind, the patient may recover and operation is not demanded. But, on the other hand, if the symptoms are severe, and there is cause to suspect perforation or gangrenous spots in the appendix, then I think nothing but operation affords the patient a chance of relief, and the sooner done the better, for by delay, septic poisoning will be set up.

DR. J. M. VAN COTT.—I should like to report one autopsy which is apropos of the discussion, in which I found the vermiform lying back of the caput coli which rested in the left iliac fossa. The entire ascending colon was dislocated, lying to the left of the median line. In perhaps 500 or 600 autopsies which I have made



or witnessed, this is the only time I have ever heard or seen such a condition.

It is not infrequent that the vermiform appendix does contain foreign bodies in the way of inspissated fecal matter, but I never have seen anything but inspissated fecal matter in the vermiform. I made a number of experiments on the caput coli to determine its location, and I found almost invariably a knife passed above the anterior superior spine of the right ilium would touch the outer lower portion of the caput coli, and that the vermiform as a rule lay on the other side toward the median line and stretching diagonally downward and inward in the direction of the true pelvis. As a rule the vermiform appendix was attached to the meso-colon.



## NOTES ON MODERN METHODS OF CLOSING WOUNDS AND CONTROLLING BLEEDING VESSELS.

BY ALEX. J. C. SKENE,

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Read before the Medical Society of the County of Kings, Nov. 18, 1890.

The pictures showing transfixion-pins and twisted, or figure-of-eight sutures used to coaptate the edges of wounds, begin to look like relics of past ages, and yet it is but a short time since these and other imperfect methods of closing wounds were considered the highest attainments of the surgical art. The revolution wrought by the comprehension of the pathogenesis of sepsis and the subsequent advent of antiseptic surgery created the demand for a new kind of suture for closing incised wounds. The requirements of the suture which will answer the purpose of the present time are that it shall be easily managed, aseptic (or sterile) when used, non-irritating to the tissues, and of such structure and composition that it will remain aseptic and resist decomposition and disintegration for a length of time sufficient for the complete healing of any wound in which sutures are required. The kind of sutures which meet these several indications are silk properly prepared, metallic thread (silver and iron) and horse-hair. Careful observation during the past fifteen years and more has satisfied me that prepared silk has great advantages over all other material. It has been used in operations that require the sutures to be left in place a long time—often a month—and where antiseptic dressings can not be employed, and where the ex-

posure to contamination is very great, and still the results have been equal to the best yet obtained in surgery. The description of the preparation of this silk suture which I use has been published, and is familiar to those who are interested in the subject. I have found that there are some surgeons who have had trouble with this silk by using white wax, which is not so adhesive and not naturally as aseptic as the yellow or unrefined wax. Ordinary yellow wax should always be used. Braided silk is the only kind that will answer. The twisted silk will untwist when being handled, and that affects it unfavorably. When properly prepared, it will keep clean in a stoppered bottle or clean rubber cloth and be ready at any moment for use. This has been demonstrated by taking samples of it and placing them in a culture medium where they have proved to be sterile. This gives perfect confidence in the aseptic properties of the silk; but as it is difficult to keep any suture clean for any length of time, and especially in threading needles immediately before an operation, I place the threaded needles in a sterilizing solution and remove them as they are used. With such care when using silk, it will be found to do its work in a most satisfactory manner.

The behavior of this suture while in the tissues is also worthy of note. It causes no irritation, does not adhere to the tissues and does not become imbedded unless made too tight. This makes removal of the suture easy for both patient and surgeon. As a rule it comes out like an earring, leaving the tracts dry and clean. A few objections have been raised against this suture. Some have found that it was not aseptic; but that can only be so when the silk is not properly prepared. It has also been claimed that if the suture is by accident not tight enough when tied, it cannot be tightened like silver wire. Ordinary care will give the required tension; but if it should happen that the tension is insufficient, it can be increased by traction if a granny-knot is used. On the other hand, if the suture requires to be loosened after swelling, this can be done with great facility if the ends are tied in a bow-knot. This is a great advantage over silver wire, which cannot be as easily loosened by untwisting it. Comparing this kind of silk with other material for sutures shows the advantage of the former.

The genius of that consummate surgeon J. Marion Sims produced the silver-wire suture, which is considered by many at the present time to be the most perfect of all. It is of great interest to know that Sims described the metallic suture and clinically demonstrated its superiority before the time of antiseptic surgery. He knew that it was the best before knowing why it was so. He obtained the facts and waited for others to establish the theory of the action of the silver-wire suture. The silver-wire suture was the only one that met the demands of certain

operations, and the great majority of surgeons used it, some of them exclusively. Any disadvantages that this suture had were not noticed, owing to its being so much better than anything else in use. More than that, the discovery of the metallic suture by Sims led to the improvement in silk and the production of a better suture than the original metallic one. This, I think, adds to the honor of Dr. Sims. I mention this because when I, about fifteen years ago, called attention to the improved silk suture, some of my contemporaries objected to it on the ground that Sims might be robbed of his dues. I knew then, as I know now, that I had quite as high an idea of, and respect for, the ability of J. Marion Sims as any one, and more than that, I had fully appreciated the advantages of the metallic suture, and had simply carried out the principles on which it acts, in making something which is at least handier and more easy to manage by the surgeon and much more comfortably borne by the patient, to say nothing of its other advantages.

The objections to the silver-wire suture which render it inferior to the perfected silk are that it is difficult to introduce. It does not fill the opening made by the needle and carrying thread unless the needle is round-pointed, and in that case it is difficult to force it through tissues, and that causes much contusion and injury of the parts. If wire which is thick enough to hold well is used, it is so stiff that it cannot be managed properly, and will not adapt itself to the parts that are to be held together. It has been claimed by some that this stiffness of the wire is one of its advantages. It is said that it acts as a splint to hold the parts together. Such a claim has no justification in fact. If there is any tension upon a wire suture, or pressure by it upon the tissues which gives the slightest splint action, it cuts into the tissues in a few hours until it becomes loose. This has been demonstrated by putting a wire and a silk suture (the silk one being thicker than the wire) into a wound beside each other and making them, as near as possible, equally tight. It has been invariably found that the silver became imbedded sooner than the silk.

Cat-gut, now often used as a suture, is defective in many respects. It breaks down too soon, which renders it wholly unfit for use in cases where the suture is needed in place for a long time. Cat-gut is an animal tissue, which very easily decomposes and is difficult to keep sterilized before using it, and while in use in many cases it loses its aseptic qualities and becomes putrid and causes suppuration. This was clearly demonstrated by Dr. Wunderlich in a paper read before this Society some years ago. Placing silk and cat-gut sutures side by side in the same wound, he found the cat-gut defective in the several respects which I have mentioned, while the silk fulfilled all require-

ments. I have tried these experiments with all kinds of sutures in use, except buckskin, and have found the silk which I use to be best of all.

Horsehair comes next to silk in practical utility, and if the hair could be obtained of all required sizes it would equal silk in every way, except that it is not so pliable. Hair, while it is infinitely more easily managed than the metallic suture, is not quite so easily tied as silk, and the ends are apt to irritate unless care is taken to guard them. But so far as being easily sterilized and remaining so in the tissues, the hair is quite a perfect suture, and it is one of the best now used for superficial sutures. If it could be found thick and strong enough for deep sutures, it might supersede all others. Silk-worm gut—so called presumably because it is not gut at all, but unspun silk—is inferior to horsehair. It is not pliable, and therefore not easily manipulated, and cannot be obtained in either length or thickness to suit all requirements. It is easily sterilized, and will remain sterile for a time while in use.

The use of the buried suture is no doubt an improvement upon the old way of closing some kinds of deep wounds. For this purpose a suture is required that is clean and will remain in the tissues long enough to do its work and without causing subsequent trouble. The function of a buried suture is the same in many respects as a ligature, and hence should possess different attributes from the superficial suture. These will be described when I come to speak of the ligature; but in this connection I may say that I have used silk for a buried suture, and found it objectionable.

#### METHODS OF CONTROLLING BLEEDING VESSELS.

There appears to be a pretty general agreement among surgeons regarding the kind of ligature to be used in controlling hæmorrhage from the larger vessels. In fact, the subject might be omitted from the present discussion, were it not that there is among some operators a disposition to use the same material for both ligatures and sutures, which is, I believe, a mistake. Again, the question may be raised as to whether the ligature is the best possible means of controlling hæmorrhage from the larger vessels. It certainly appears that the perfection of the surgical art has been attained in this regard. One sees the vast progress made by comparing the practice of surgery a few years ago and that of the present day in regard to the ligature of vessels. In the first amputation of the leg that I witnessed the arteries were ligated with thick silk that had every chance to be very dirty. The long ends of the ligatures were gathered up, tied together, and left hanging from the stump. The flaps of the stump were stitched together with silk that could hardly be clean except by accident. Some lint and a band-

age were used as a dressing. Then followed daily washing with water and redressing. In a few days the sutures had to be removed because they were causing irritation. Suppuration was free and union long in coming. At the end of two weeks the process of taking away the ligatures began. This consisted of a daily tugging and twisting of each ligature until the ends of the arteries gave way and the ligature was loosened and could be withdrawn. It was a long time until healing was completed. I have in later times seen the same operation performed and the stump healed in about a week, the only after-treatment being the removal of the sutures.

The great advances of the present time are due to all the factors in modern surgery, but to no one more than the kind and quality of the ligatures used.

The cat-gut ligature, if properly prepared and skilfully handled, answers all the requirements of modern surgery. I make this statement, fully believing it to be true, but at the same time knowing that if in this I am mistaken, there are those present who will correct me. The cat-gut can be made perfectly aseptic, and when enclosed in a clean wound will remain so, and will disappear when it has fulfilled its functions. In open wounds where it is exposed it will decompose and become septic. Such wounds are rare; but in such a one silk might be better, because it would be eliminated but not decomposed.

The objections which have been raised to the cat-gut ligature are that it is difficult to make and keep it aseptic; but I fancy that the same objection obtains in all kinds of animal ligatures. I have tried quite a number of them, such as the tendon of the whale, kangaroo, etc., but have failed to find any advantages in them. As cat-gut is usually sold, the finer sizes are, as a rule, sterile, the larger sizes not always so. That which is sterilized and kept in carbolic acid and oil is bad, as a rule. Chromicized cat-gut is clean if kept with care. One is not safe, however, in trusting to manufacturers to supply goods that are uniform and reliable. I have therefore adopted the practice of using only fine cat-gut, Nos. 1 and 2, finding that they are the least likely to be impure and are at the same time strong enough to ligate any artery that I may encounter. I also endeavor to make doubly sure by sterilizing each ligature immediately before using it. This is done by placing the cat-gut in a solution of bichloride of mercury long enough to make sure of thorough disinfection. Another advantage is gained by this. The cat-gut is usually hard and curly when taken off the spool and is difficult to manipulate, but when immersed in the solution it becomes soft and pliable, and just as soon as it becomes so it is at the same time sterilized. This I have found by actual experiment. There is one trouble in this practice: the ligatures have to be prepared before the

operation, and if they are needed very soon they are not ready, and if delayed they become too soft. This is overcome by keeping them in the solution long enough to become pliable, then wrapping them in a sterilized towel, where they remain all right until needed. There is still an objection to be overcome. One needs to prepare all the ligatures which may possibly be required at a given operation, and may find that many are left over and are useless; but the loss is not great, and I prefer to meet it rather than have a doubt about the safety of ligatures or buried sutures.

This method gives perfect satisfaction as far as the use of fine cat-gut goes. When a strong ligature is needed, as in ligating the pedicle of an ovarian cyst, for example, I feel sure that it is safer and surer to use silk properly prepared. This is the only exception to the rule laid down at the outset, that cat-gut is the best ligature and prepared silk the best suture.

It will be readily observed, upon a moment's reflection, that the buried suture is required to do about the same thing as a ligature. Both are placed in position to stay, not to be removed when their work is done, as in the case of the superficial suture. It follows, therefore, that the same characteristics are required in both. This is the rational inference from the facts in the matter, and I have amply proved it in practice.

The methods of selecting and preparing the cat-gut for buried sutures should be the same as described in regard to ligatures, and the results will be equally satisfactory. I have already said that the silk used as the perfected superficial suture has been used as a buried suture; but while it fulfils most of the requirements, it is objectionable, from the fact that it is not taken up or disposed of after doing its work. At best it remains in the tissues in a quiescent state. It is not absorbed and does not disappear. In fact, the silk prepared for superficial sutures is more difficult to dispose of when left in the tissues than pure unprepared silk, and hence is objectionable.

The fact that the cat-gut ligature, for the control of bleeding, is so much in advance of anything used in the past leads one to rest satisfied. On the other hand, the great advances made suggest the possibility of some further improvement, and favor the hope that a still better method may be found to control bleeding vessels. This hope grows when the fact is considered that the cautery is found to be the best to stop the bleeding from large vessels in a mass of tissue, like the pedicle of an ovarian tumor. I speak of the cautery, but the proper treatment of the pedicle is not cauterization at all, but compression and desiccation.

I do not know of anything that is more generally misunderstood than this method of controlling hæmorrhage. While there are some who know all about it, there are many who are entirely ignorant of its principles. This is seen in the statements which frequently appear in medical journals to the effect that the pedicle was ligated with silk or cat-gut and the end of the stump cauterized with the hot iron. Now, the facts are that this charring of the tissues with the actual cautery is about the worst treatment possible; while compression and desiccation (by means of the clamp and cautery) are the best, most surgical, and practically give the best results. The tissues are thoroughly compressed by the clamp, and while under pressure heat is applied sufficient to desiccate all the parts within the clamp, but not to char them. The stump is left in a condition which arrests all hæmorrhage and also favors revitalization or absorption. While there may be some uncertainty regarding the way in which this desiccated tissue is taken care of, it is well known that the repair of the stump is prompt and perfect, and it is quite possible that the tissues become organized in some cases and in others they are absorbed. It is quite otherwise with tissues that have been charred by the cautery. Such material cannot become organized, neither can it be absorbed readily. It occurred to me that treatment of arteries which does so well in the pedicle of ovarian tumors might be applied to other vessels in place of the ligature. Having settled the fact that by compressing the end of an artery for an eighth to a quarter of an inch and heating it enough to desiccate would arrest bleeding and leave no foreign substance in the wound that could in any way interfere with healing, attention was next given to find a way to do this quickly and effectually. An artery forceps was obtained with smooth jaws set at an angle to the blades and flaring from the points upward. With this instrument the artery is seized and held and the fine point of a thermo-cautery is placed between the blades and kept there long enough to desiccate that portion of the artery within the grasp of the forceps. Considerable experience is required to know how long to apply the cautery, and also when to remove the forceps without pulling the walls of the artery apart and starting bleeding.

It still remains to be seen whether this method of controlling hæmorrhage can be practised as quickly as using a ligature. If that proves to be the case (and I am inclined to think it can), then this will be an improvement. The whole subject is still under consideration, and is offered now more in the way of suggestion than as something mature in surgery.

## THE ADHERENT PLACENTA.

BY A. ROSS MATHESON, M.D.

Read before the Medical Society of the County of Kings, December 16, 1890.

Of the many complications incident to parturition, none have caused me more anxious solicitude than those in which the placenta was involved. I may here mention that placenta prævia, and other complications of a grave character, have fallen to my lot, the history of which I will reserve for another occasion, and consider the subject of my paper :

### THE ADHERENT PLACENTA.

True adhesion of the placenta to the uterus is a rare condition. A noted obstetrician has said that "the most experienced accoucheurs and midwives see the fewest cases of adhesion."

The causes which produce this adhesion can usually be traced to a placentitis or a bygone endometritis. Cazeau states that these adhesions are caused by the fibro-fatty degeneration and atrophy of the villi of the chorion and of the cotyledons which they form. Syphilis, according to the researches of Virchow, is a frequent cause. Mechanical irritation, as from long-continued compression of the placenta between some resisting part of the fœtus, the head, for instance, and the abdominal wall, is regarded by Hegar as an occasional cause. Spiegelberg says: "This adhesion, whatever the immediate physical cause, is primarily due to endometritis, and generally to such of an earlier date. Endometritis can account for the hyperplasia within the placenta as well as for the imperfect development of the areolar, ampullary layer, for these may both result from a previous destruction of the glands, and their partial replacement by connective tissue."

Five cases of this complication have come under my care, a brief history of three of which will be included in this paper.

CASE I.—On the 17th of June, 1881, I was called to attend Mrs. R., aged 34 years, born in Cuba, a delicately-formed lady, whose father, mother, two brothers and a sister had died of phthisis. She had been married ten years, had given birth to three children at full term and to a fourth at the seventh month of utero-gestation, a little less than a year previously, which labor was complicated with placenta prævia. On my arrival at her bedside I found her in labor; she was alarmed and excited, as she did not expect to be confined until August, her last menstruation having occurred about the middle of November, 1880. Her pains were severe and at intervals of from ten to fifteen minutes,



and accompanied with slight hæmorrhage, which did not tend to allay her fears, as the peril of her last confinement was too recent to be forgotten. An examination revealed a vertex presentation and labor progressing satisfactorily. In about two hours she gave birth to a seventh-month fœtus, which lived but a few hours. Soon after the delivery of the child the uterus contracted frequently and firmly, without accomplishing any result. I then endeavored to expel the placenta by Credé's method and by gentle traction upon the cord, but finding these efforts equally futile, I introduced my hand into the uterine cavity and found the placenta adherent over a considerable extent of the surface. I directed the nurse to place her hands externally over the uterus, steadying it, while I drew the cord tightly with my left hand, and carefully insinuated my fingers between the placenta and the inner surface of the uterus. I was succeeding admirably in breaking up these adhesions when I was compelled to desist on account of the powerful compression of my hand inducing cramp and rendering it useless. Dr. Maddren then came to my assistance, and with the aid of an anæsthetic we continued the work. Hour-glass contractions having supervened, it was difficult to determine the boundary line between the placenta and the uterus, and being compelled to relieve each other at short intervals, we progressed so slowly that when the separation was almost completed, our patient manifested such pronounced exhaustion that we summoned Dr. L. S. Pilcher to our aid, who succeeded in bringing away in a mass the greater portion of the placenta, but not all, and this terminated manual interference.

On the fifth day after confinement a small piece of the placenta was expelled, and on the seventh day another, about an inch and a half in length and about three-quarters of an inch in thickness. For nearly a month there was a discharge containing placental detritus. Her temperature on the second day was  $101^{\circ}$ , on the third  $100^{\circ}$ , and then became normal. She made a good recovery.

CASE II.—Mrs. Y., aged 25 years, born in the United States, well formed, active habits, good health and excellent family history; was taken in her first labor, June 14, 1883. After five hours she gave birth to a healthy, well-formed boy, weighing about eight pounds. While ligating the cord, I observed a gush of blood, followed by a large mass, which I recognized as the inverted uterus with the placenta firmly attached all over the fundus, presenting between the woman's thighs. To check this torrent of blood which poured from an open sinus; where a portion of the placenta was separated, I grasped the uterus with both hands and firmly encircled it near its vaginal attachments, effectually controlling the hæmorrhage. The woman was nearly in a state of syncope; the bolsters and pillows were removed from under

her head, the foot of the bed elevated, and brandy and iced water administered. We were fortunate in having a telephone in the house, and were soon in communication with Dr. Skene, who promptly came to my aid. I was obliged to hold the uterus until the doctor had completed the separation of the placenta from the uterus, as the slightest relaxation of my grasp was followed by loss of blood. Dr. Skene then formed his fingers into the shape of a cone and made pressure on the centre of the inverted fundus, pushing it upward through the inverted cervix, which distended without difficulty, until complete restoration was accomplished. Uterine contractions soon followed, and the process of involution proceeded regularly, and with but little febrile disturbance. She made an excellent recovery.

The inverted uterus presented two conditions to which it may be well to call attention. First, the absence of either rhythmical or tonic contractions. Compressing it, as I was obliged to do in preventing hæmorrhage, and the manipulations of separating the placenta, exerted no more influence in producing contractions than if the viscus was destitute of muscular fibres. Second, the function of sensation was entirely suspended, and she experienced not the slightest pain until the organ was restored to its normal position. She made a good recovery.

CASE III.—On the 24th of December, 1884, Mrs. Y. (Case II.) gave birth to her second child, a female, weighing about eight pounds. I took the precaution, as soon as the head and shoulders were delivered, to follow up the funis, and as the child was expelled to carry my hand into the uterine cavity, where I found the placenta completely adherent. There were powerful expulsive efforts, any of which would have produced inversion were it not for the resistance offered by my hand. I sent for Dr. Skene, and we proceeded to separate the placenta with the aid of an anæsthetic. This operation required nearly two hours. The contractions were very strong, and we were obliged to relieve each other at short intervals. The uterine wall was very thin at the seat of the placental attachment, and as we were apprehensive of perforating it, we were obliged to proceed with great deliberation and care. The main portion of the placenta was removed. Curetting or other interference was deemed inadvisable. The patient made a good recovery, although there were several pieces of placenta expelled during the period of involution. This patient was again confined in December, 1888, and the labor was normal in every particular.

The manipulations necessary in these cases are very important. The integrity of the cord should be preserved until the placenta is removed, as it furnishes a guide for your fingers, and enables you to make traction on the cord-like adhesions which bind the placenta to

the uterus. To separate these, begin at the highest possible point of attachment, as the contractions materially assist in expelling the clots and placenta, whereas beginning lower down tends to produce hour-glass contractions and cramp of the hand. When the adhesions are firm and close, great care is required to avoid digging into the substance of the uterus, the finger nails should be used with a sawing motion, from side to side, and the bands should be divided by pressing them between the thumb nail and the index finger. Patience and time are required, and if it is possible, the hand should not be withdrawn until the entire placenta, or as much as can safely be separated, is removed; but this cannot be done in many cases, as the contractions will so exhaust and almost paralyze the hand and also produce cramp, that a rest is imperatively needed.

## DISCUSSION.

Dr. JEWETT.—Mr. President: I have been interested in the account of these cases, as they are unquestionably true examples of adherent placenta in the pathological sense. This is not true of all cases so interpreted. It is not perfectly easy to draw the line between the physiological and pathological adhesion. The attachment is normally firmer in premature than in term births. Even at full term the firmness of attachment varies within physiological limits. If the uterus remains in a condition of inertia after the birth of the child, separation failing, the natural adhesion of the placenta may be easily mistaken for a morbid one. Such I believe is not infrequently the case. In support of this view I may refer to the statistics of Winckel. In a series of five thousand cases, he delivered the placenta by manual separation in forty-two. In a later series of thirty-five thousand cases he interfered in this manner in only eight. In the former series he followed the practice then popular of delivering promptly after the second stage. In the latter the third stage was treated by the expectant plan, and nature, when allowed sufficient time, proved competent in many cases in which earlier delivery would have required peeling off by hand.

When morbid adhesion does occur it must be due to morbid conditions of the endometrium. It does not usually involve the whole placental seat, but obtains in parts of it only.

With reference to diagnosis a placenta which is not delivered after an hour or more with the proper use of Credé's method is abnormally retained, and if it cannot then be delivered by combining the usual external and internal measures with one hand over the abdomen and one or two fingers of the other passed within the uterus, it is abnormally adherent, as a rule. My experience would lead me to believe

that adhesion to this degree does not occur more than once in four or five hundred cases.

As to treatment, the method of Credé will almost never fail in simple retained placenta if rightly applied. The compression should be used only during the acme of the pain and then with increasing force during each recurring pain. The reason why it now and then fails in unpractised hands is usually too little pressure, or, perhaps, misdirected pressure.

There is no great objection to the introduction of the hand into the uterus if the hand is clean; the method is sometimes necessary even in simple retention of the placenta, though very rarely.

That peeling off the placenta is not entirely free from peril is shown by the experience of Winckel. Of fifty cases in which he separated the placenta with the hand in utero, nine died. The causes of death were septic infection, thrombotic affections and air embolism. This procedure is attended with more or less risk independently of the preventable danger of sepsis.

Dr. DICKINSON.—In addition to these cases of the common kind, where firm bands render the placenta adherent to the uterine wall, there is another class of cases in which the placenta is very much thinned and spread over a considerable surface, which renders its expulsion by the uterus difficult. Doctor Coe recently reported a case of this kind, and I have found one where the thinned placenta covered a large part of the cavity of the uterus and could not be expelled by the uterus without being peeled up. I do not remember that these cases are particularly adherent, but they have required some interference and the necessity of carefully peeling the whole surface. In a large number of cases of adherent placenta, only a small surface of the placenta is adherent, and a finger placed in the uterus is sufficient. This is not so in bad cases like Dr. Matheson's. The trouble I find with most medical students and younger practitioners is that they call retained placenta, adherent placenta. The difficulty lies in the fact that they do not use sufficient force in applying Credé's method; when they call in the assistance of one who uses Credé's method with more vigor and persistence, he is able to expel the placenta readily.

Dr. STUART.—I recall a case that I saw with Dr. Wallace, but as he is not here I will report it. I had taken with me a student to whom I was teaching obstetrics, to a case that I was engaged to attend. The patient was delivered, without any trouble, of a living child. The placenta did not come away, nor did it yield to compression of the uterus. Under chloroform, I introduced my hand into the uterus and found the placenta firmly adherent. I soon became exhausted in my efforts to get it away, and I sent for assistance. Dr. Skene was not

able to respond, and my student called upon Dr. Wallace, who kindly came, and when he saw the patient and ascertained the condition, he said: "Doctor, I attended this patient once when she had retained not adherent placenta."

We kept the patient under the influence of chloroform for about four hours, relieving each other in our efforts to remove the placenta, which we did piecemeal, and most of the pieces taken away were not larger than the last joint of the thumb. We at last succeeded in removing every vestige of the placenta. I called upon the patient the next day with fear and trembling, expecting serious reaction from the severe treatment we had been obliged to subject her to, but to my astonishment she showed no symptom of having been through any but a normal labor. This patient went on to a complete and perfect recovery from her very severe experience without a single untoward symptom.

On being asked by the President to present some cases which had lately occurred in her practice,

Dr. MOSHER said: The two cases which I would report were not adherent placenta, but of adherent membranes near the border of the placenta. Both labors were normal up to the third stage. In the first case no effort was made to remove the placenta during the first half hour. Then, upon making traction upon the cord, I found it apparently very tightly adherent, but I waited still another half hour. The uterine contractions became very severe and the suffering of the patient greater than during any time of the labor. She was a nervous patient, and was becoming very much worn out by the pain, and it seemed wise to find out the cause of the retention. Upon putting my hand into the uterus I found the placenta was separated over its whole surface, but the membranes at the edge of the placenta on one side were so tightly adherent that they could not be separated without injury to the inside of the uterus. The portion attached was large and firm-like the lash of a whip. I could not find that there was any lack of contraction of the uterus at the point of attachment. I made as much effort as I safely could to separate this band, and finding it impossible to do so, I broke the membranes from around it and left it there. The patient recovered without any rise of temperature, expulsion occurring two days later spontaneously.

The second case was of a little different character. The placenta did not come away, and after half an hour of apparently good uterine contractions I used the method of Credé, making very firm pressure with each pain, but without good results; my patient was losing so much blood that I found it necessary to interfere. In this case, after passing the dome of the uterus, my hand entered a cavity on the right

side near the point where the fallopian tube leaves the uterus, sufficient in depth to permit the passage of all my fingers, and at the bottom of this the membranes were firmly fastened. They were so adherent that I could not separate them. In this case, again, I was obliged to break off the membrane as high up as I could and leave the remainder behind. I think I left there a small portion of the placenta. I washed out the uterus with a hot solution of bichloride of mercury to check hæmorrhage and remove débris; it contracted well, and in this case, as in the other, there was no rise of temperature, and I never had a patient make a better recovery. The membrane came away on the third day.

Dr. MORTON.—I agree with Dr. Dickinson in the opinion that in a large number of cases put down as retained placenta, the retention is due to the fact that Credé's method is not used with enough force. I remember one case in the Munich Maternity Hospital, where I served as interne under Prof. Winckel. In this institution it was the custom to wait two hours after the delivery of the child before Credé's method was applied. In this case, after the usual time had elapsed, this method was used, but without success. Prof. Winckel arrived soon after and attempted Credé's method without an anæsthetic, and also without success. He then gave the patient an anæsthetic, preparatory to introducing the hand. Tried Credé's method again, using a very considerable amount of force, and delivered the placenta successfully. In listening to Dr. Jewett, it occurs to me that perhaps one reason for the large mortality which took place in the earlier years of Prof. Winckel's practice was because antiseptic precautions were not carried out then as at the present time. In private practice I have seen one case of adherent placenta. The labor was normal, but I could not deliver the placenta by Credé's method. Dr. Hale administered an anæsthetic, and I made a second attempt, using a good deal of force, but still did not succeed. I then introduced my hand and peeled off the placenta. There were no fibrous bands in this case, but the relationship between the placenta and the uterine mucous membrane was very close, but I succeeded in getting away all of it.

I irrigated the uterus with a two-per-cent. solution of carbolic acid, put in a couple of iodoform suppositories, and the patient never had a rise of temperature.

Dr. JEWETT.—There is one point that I should like to have heard discussed—the method of peeling off the placenta. The writer of the paper suggests that the manual separation should be begun from the upper portion of the placenta and not from the lower, owing to the danger of setting up hour-glass contraction. I have preferred to begin with the portion which is already peeled off. This seems to me the

more rational and more feasible method. As to the greater danger of inducing hour-glass contraction by beginning from below, I doubt. Uterine contractions will be provoked by irritating any part of the cavity—contractions, I mean, of the entire active portion of the uterus.

With reference to hour-glass contraction, of which we hear so frequently, I have always believed there is some misapprehension. When we remember that the uterine muscularis is an intricate mesh-work of muscular bundles running in every direction, it is difficult to understand how contraction can take place in any one zone alone. The placenta may be locked up in the cavity of the uterus by a normal contraction; the uterus may then present an hour-glass form by reason of the closure at the ring of Bandl and the trumpet-shaped expansion of the flaccid portion below it. So, too, if the placenta is packed away in one cornu, that portion of the uterus cannot collapse during a contraction which will cause closure everywhere else. But these conditions are due to the presence of the foreign body—not to irregular contraction. Hour-glass contraction, then, is, I believe, not a pathological condition except in so far as concerns the presence of the foreign body.



## PUERPERAL INSANITY, WITH REPORT OF A CASE.

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Puerperal insanity, in its inception, at least, falls to the care of the general practitioner engaged in obstetrical practice. There is no other disease in which he and the alienist are merged into such intimate relationship. The puerperal period is necessarily one of apprehension. Of all its concomitant conditions, there is none of graver concern to the medical attendant, or more appalling to the friends, than the subject of this malady. An occasion of joy, it is converted into one of gloom. Condolence and sympathy are extended in lieu of congratulation. The physical outlines of the wife and mother are present, but an evil spirit holds her in thrall. The physician appealed to can give no definite assurance of its course, duration, or termination.

Puerperal mania was for a long period of time the term applied to all forms of mental disturbance affecting pregnant and puerperal wo-

men. This created great confusion, as the term was misleading in relation to both the description of the condition and time of its occurrence. The classification now generally adopted and first given to the profession by Dr. Skae, of England, separates what was formerly meant to be conveyed by the term into three divisions, namely, insanity of pregnancy, puerperal insanity, and insanity of lactation. You will perceive that the distinctions made have reference to the time of appearance only. The term puerperal insanity is pertinent, permitting of the after designation of the type. The claim is made by a few that each of the divisions possesses clinical features capable of differential diagnosis. Such specific designation would seem to indicate a special etiological factor for each division. The majority of neurologists not only claim that there is no peculiar pathological state, but, on the contrary, the neuroses, pre- and post-puerperal, are the ordinary well-known forms of insanity, and that the condition acts simply as an exciting or predisposing cause. From this it is safe to assume that a given case of puerperal insanity could not be recognized as such without the knowledge of the existing puerperal state. On the other hand, Fürster, a well-known German writer, is one of the few believers in a specific origin. He writes: "Its characteristic sign is an acute, intense setting in of the first symptoms within a few hours, or even less time, and which may go on to complete delirium, accompanied by the most pronounced motor excitement. This delirious condition seldom lasts longer than three months, and is characterized, like its acute beginning, by extremely pronounced sensory delusions, passing tolerably rapidly into a somewhat stupid state." His, also, is the only dissentient voice to the rule that mania is the more common form.

Admitting, however, that insanity at the puerperal period, to which I shall confine myself, is not of a specific origin, there are modifying conditions and complications that lend to it a certain isolation.

This psychosis when fully matured presents two distinct nosological entities—mania and melancholia. It is possible for one to follow the other, or both may degenerate into dementia, recognizing it as a termination. There is a condition of intense stuporous melancholia that resembles dementia from its beginning, but this is of rare occurrence. Let it here be distinctly understood that the two principal forms, mania and melancholia, cannot exist in the patient at the same time. Sixty-six per cent. of the cases appear under the maniacal form. Women in every position and condition of life are its subjects. Age is a predisposing cause, statistics showing it to be more common between the ages of twenty and thirty years than after. This can easily be accounted for by reason of the chief exciting cause, parturition occurring for the first time between those years. Primiparæ show a great percentage over



multiparæ, although frequent childbearing lowers the general tone and in this manner acts as a predisposing element. It is the consensus of opinion that heredity, not only of insanity but of the common neuroses, particularly on the maternal side, is the foremost factor in its production. This transmission can generally be observed in the irritable, erratic and hypersensitive character of the individual. Mental emotion, such as the loss of a relative, sudden fright, disappointment, the receipt of sad news and allied extrinsic occurrences are strong exciting causes. Most powerful is parturition, not only on account of the moral and physical shock of prolonged labor, but to its sequelæ, immediate and remote, acting through the circulatory and sympathetic system. Severe hemorrhages produce anæmia. According to Ripping, anæmia is at the root of all the puerperal psychoses, being well marked in one hundred and fifty of his own cases. Uræmia and septicæmia are believed by many to have a causative influence, and by others as coincidental. Reflex phenomena are said to be produced through subinvolution and inflammatory conditions affecting the genito-urinary system. Holmes, in the *Canada Lancet*, claims that laceration of the cervix uteri is a cause, and that a cure followed its restoration in thirteen cases. It may possibly have some effect through reflex irritation, but if a cause, we would probably have heard, ere this, of some modern Diogenes searching for a sane childbearing woman.

The only diseases with which puerperal insanity can be confounded are hysteria, delirium tremens, and the delirium resulting from fever. Error is possible only at an early stage of the illness; when matured, its recognition is a simple matter. The onset may be sudden—is frequently so with mania. This type is characterized by violence and excitement, is ordinarily ushered in without fever, but which is developed to a slight degree within a few days. Melancholia is gradual in its development; slight nervous disturbances, daily increasing in gravity, give evidence of its approach. When developed it is marked by great mental and physical depression, fear and despondency being the ruling emotions. At first it is sometimes difficult to be positive of the true type presenting. A melancholic patient suffering from a terrifying delusion may, in an endeavor to escape from her imaginary persecutors, become boisterous and violent, exhibiting all the signs of maniacal excitement, which, when traced to its source, reveals the cause of the patient's frenzy. The two types are never so intimately blended but that with careful study their distinctive natures can be established. The following symptoms are common to both conditions: Pulse hurried, small and irritable; face pale, drawn and pinched, in mania sometimes flushed; skin clammy, tongue coated, bowels constipated, insomnia marked and persistent, antipathy to food, intolerance of restraint, dis-

like for husband and child, or great anxiety on their account, suspicious of attendants and surroundings, suicidal impulses and lascivious in words and actions. The symptoms chiefly characteristic of insanity, and to which the greatest importance is attached, are delusions and hallucinations. They correspond to the existing form of the psychosis—the maniacal being wild, turbulent and destructive; the melancholic sad, depressed and sorrowful. The vagaries of the delusions and hallucinations are varied only in strangeness by their number. During the acute stage the bodily health corresponds with the mental. The gross pathological anatomy shows that in melancholia the brain is anæmic with the perivascular spaces filled with a clear watery fluid, while in mania the vessels are injected and the pia frequently adherent. Puerperal insanity may terminate in complete mental and physical restoration or incomplete mental recovery, as, for example, dementia, or even death. The given percentage of complete recoveries varies considerably; the highest is placed at eighty, the lowest at forty. About seven per cent. recover before the second month; the greatest number between the second and sixth. The age of the patient will be found to have an important bearing on the question of prognosis, and youth, if combined with early and judicious treatment, is strongly conducive to recovery. Patients suffering from the puerperal form are said to recover more rapidly than from insanity of pregnancy or lactation. Its average duration is nine months—seven and one-half for maniacal, ten and one-half for melancholic. Insanity itself rarely kills. The cause of death is usually found in some complicating inflammatory condition. Puerperal eclampsia, followed by insanity, will as a rule terminate in death or recovery within a few days—a point well worth remembering.

Recovery is gradual in melancholia; up to the ninth month, if improvement is at all perceptible, there is a possibility of a cure. After one year, recovery may be considered next to hopeless. Gooch, whose monograph upon this subject is well known, divides mania into two divisions—one attended by fever, or its accompaniment a rapid pulse; the other devoid of fever. The former die; the latter recover. It is a trite saying that mania is more dangerous to life, melancholia to reason.

At what time can we consider our patient cured? It is impossible to give an assurance of a permanent one. When all evidences of mental derangement have passed away and the physical wellbeing again established, we can upon the appearance of the menses consider her temporarily well at least.

One pleasing feature in the treatment of this complaint is the absence of the lengthy list of drugs usually accompanying a disease of such venerable age. Our forefathers were likewise limited in their choice of remedies. Before proceeding, it might be well for me to

revert to a remnant of their practice that still prevails to some extent with the profession and is held sacred by the laity. I refer to blistering and cutting or shaving the hair of the head. It is needless to say that more harm than good is done by this treatment. The presence of fever should cause us to look for some inflammatory accompaniment. Our first inquiry should be directed to the genito-urinary system, as it is here we are likely to find complications of a serious character. Failure should cause us to continue our search until all of the principal organs have passed under review. The first question that naturally presents itself to the practitioner is, whether his case is one for hospital treatment. Decidedly not if the surroundings are such that the proper attention and sanitary conditions can be obtained. Otherwise, of necessity, yes!

The sick-room should be plainly furnished, uncarpeted, with all unnecessary articles removed. Let it be bright and cheerful instead of darkened. The bed should be low, a mattress on the floor being preferable if the patient is violent. Skilled nursing is a *sine qua non*, and if possible, a nurse having experience with the insane procured. The patient should never for a moment be left alone. Friends and sympathizers should be rigidly excluded and the nurse empowered to carry out the strictest discipline as far as visitors, even if relatives, are concerned. As little physical restraint as possible should be used, moral suasion having better effect. The exigencies of each particular case will have to be met with the resourceful ingenuity of the attendants. Unceasing attention should be paid to the patients' nutrition, which should be of a nourishing and digestible character sufficiently varied to tempt the appetite. There is no necessity of confining the patient to liquid or semi-solid food. Should there be an obstinate refusal to take nourishment, forcible measures must be resorted to and liquids given through a stomach tube, or nutritive enemata employed.

The production of sleep is a requisite, but convalescence does not necessarily follow it. Warm baths occasionally are beneficial, if agreeable to the patient. Coming now to medicinal remedies: On general principles it is well to commence with a saline cathartic and keep up a mild laxative effect. Hydrate of chloral, alone or in combination with the bromides, is recommended by all writers upon the subject. The bromides do not produce sleep, but are valuable when there is cerebral erethism, denoted by the flushed face and congested conjunctiva. Paraldehyde is often efficacious in producing sleep, certainly more so than sulphonal. In cases of nocturnal restlessness in maniacal patients, tincture of digitalis is recommended by some, and considered valueless by others, for the insomnia of melancholia. German authorities advise treatment with the wet sheet. Hyoscyamus and its preparations are

spoken of doubtfully. Hyoscyamine should be given at but infrequent intervals, and only after other measures have failed to produce sleep. In all cases of acute excitement it is well to avoid the chalybeate preparations, but after the abatement of the maniacal manifestation now, bitter tonics and phosphates are serviceable. Opium has been singled out for almost universal condemnation as useless in mania and of doubtful value in melancholia. "If you want your patient to die, give opium," is the manner in which one author expresses himself. Maybe a fugitive inquirer has asked why this paper was written. I answer, to place the subject before you from a general practitioner's standpoint, and to let you judge of the effects of opium in the treatment of a case of melancholia which I will now take pleasure in submitting. I have abridged the history as much as possible, giving only the salient points.

CASE.—The patient, Mrs. W., was admitted into St. Mary's Hospital, August 11, 1890, presenting the following history :

Age 19 years, married 4, 3 children, youngest born on the 18th ultimo ; neurotic temperament, family history of insanity on the paternal side ; pulse 120, weak and thready ; respiration 36, shallow and jerky ; tongue coated, bowels constipated ; digestion poor, skin marble like in color, showing great anæmia ; slight in physique, weight 110 pounds, height 5 feet 6 inches. She was attended during her confinement by a midwife. The labor was said to have been easy and normal in every respect. On the sixth day after her delivery she was startled by hearing the noise of a fire engine passing on the street. Jumping from her bed, she ran to the window, and looking out, perceived that an adjacent orphan asylum was on fire. Very much frightened, she was assisted back to bed, and in a short time became hysterical and was said to have had a convulsion, which from its description I am inclined to doubt. On the following morning all evidence of the fright sustained on the previous evening seemed to have disappeared ; she was bright in appearance and cheerful in manner. Subsequent to the ninth day, she was permitted to leave the bed. Her convalescence seemed progressive until the fourteenth, when she complained of pain in her head, back and limbs, accompanied by fever. Mild delirium and unnatural actions now alarmed her relatives, and a physician was summoned. He pronounced the case puerperal fever with hysterical elements ; ordered the vagina syringed twice daily with a weak solution of carbolic acid, and prescribed quinine in large doses. The patient grew steadily worse. On the eighteenth, four days after the appearance of the above symptoms in the mother, the child died. Her condition now became so critical in the eyes of the physician that he pronounced the case hopeless and relinquished his attendance. A second physician was called in, and acting upon his advice she was sent to the hospital. I first saw

her on the 12th of August, the day following her admission. My entrance into the sick-room failed to elicit the faintest recognition by word or look. Queries were responded to by a repetition of the same. Turning from side to side, she incessantly kept repeating some word or meaningless phrase. Interrupted, she would commence to cry, sigh or sing. If the words of the song were of a humorous character, they would be intoned with a mournful cadence. Marked delusions and illusions were present. All of the other senses were acute. The only sign exhibited of remaining intelligence would be an occasional correct monosyllabic reply to some question which possibly might have been mechanical. During the previous twenty-four hours she had slept but one and one-half hours, and that uneasily. Her face was flushed, eyes brilliant, voice strong, but physically she was very weak. Temperature by the axilla  $104\frac{3}{5}^{\circ}$ , pulse 120 and compressible. Reasoning that the high temperature might possibly be due to intra-uterine septic influence, I gently curetted and washed it out with a solution of the bichloride 1-5000 and gave directions to have the douching continued with the same solution twice daily. There was but a slight lowering of the fever during the three following days, showing my surmise to have been wrong. Pills containing one grain of the alcoholic extract of hyoscyamus and one-half grain of the sulphate of morphia were ordered to be given every hour until sleep was produced or a condition of quietude secured. But slight improvement followed their administration. No sound sleep produced. Temperature fluctuated between  $102\frac{1}{2}^{\circ}$  and  $104^{\circ}$ , pulse and respiration corresponding. During this period and all through the illness liquid food was taken in great quantities. Sulphonal in twenty-grain doses every four hours at night had but a negative effect. On the fourth day after admission, condition practically the same. The hyoscyamus and morphia were discontinued and the following substituted: Hydrate of choral 15 grains, sodium bromide 30 grains, tincture of digitalis 10 m., to be given every one and one-half hours if necessary. Caution in its administration and watchfulness over its effect upon the heart urged. At about this period the nurse called my attention to a small circumscribed redness over the inner and middle aspect of the right mamma. Fluctuation was determined and the part incised. A free flow of laudable pus followed. There was no other appearance of mastitis than the above-mentioned redness, the breast as a whole appearing normal. The abscess proved to be of the submammary connective tissue variety, and was followed by abscesses in both axillary regions and a subcutaneous one in the left mamma. Those in the axillary region healed quickly, but both breasts continued discharging for a lengthy period of time, one alone having healed at the time of the patient's discharge. The formation and open-

ing of the abscesses corresponded with the rise and fall in the temperature, as can be observed in the chart, likewise its uniformity after free drainage had been established in all. From the commencement of the chloral combination the patient had long and tranquil periods of sleep. Hope of improvement had now good grounds for existence. A cessation of the medicine long enough to permit the somnolent condition to entirely pass away revealed a return of the old condition. The quantity required to produce quietude after a few days brought on a severe attack of enteritis with marked tympanites. The heart's action became very much weakened and death from exhaustion threatened. Two grain suppositories of opium were then given every two hours, with an ounce of brandy at the same intervals. Within forty-eight hours they were discontinued, as their need had passed away, and the chloral treatment resumed. The following week undoubted improvement was manifest. The patient would rest tranquilly for short periods when awake, was able to distinguish her attendants and give correct replies. Yet the mixture, when pushed to the necessary extent, would invariably produce an enteritis, and what was a gain in one way was a loss in another. The sister-in charge one morning made the remark that she noticed the patient was mentally brighter and continued so for a longer time after awakening from the sleep produced by the opium than that by the chloral. Acting upon this information, opium alone was given in the form of powder as often as required. From this period there was no mistaking the gradual and marked improvement in both her mental and physical condition. For one week prior to her discharge, it would only be at rare intervals that the slightest signs of mental derangement could be detected. She increased in weight, was able to be up and about the halls, recognized all friends, could carry on a connected conversation, and seemed to be in a fair way of a temporary cure at least. The husband, against our wishes and approval, removed her to his home on the 22d of September, about ten weeks after her admission. Being interested in the case, I secured the name of the physician called in to attend her after the removal, and received from him (Dr. Miller) the following facts: At the time of her removal from the hospital she seemed to be perfectly sane. The return to her old surroundings appeared to cause her annoyance, and by degrees she became possessed with the delusional idea that her husband had married another woman during her absence in the hospital. She would persist in looking about to find the woman, and could not be reasoned with. During her stay in the hospital there were no systematized delusions. The doctor not knowing the treatment pursued at the hospital, placed her upon potassium bromide with small doses of hyoscyamine. Failing to produce sleep, he gave thirty-grain doses of sulphonal without effect, but did succeed in

producing it with chloral. Retrogradation rather than improvement followed in the patient's condition. The case passed from Dr. Miller to Dr. Lamadrid, and from him to the Physician that heals all earthly ills. I have notified the doctor of my intention to bring the case before the Society, with the hope that he would be present to further enlighten us upon the case.

The following conclusions, I think, can be drawn from the case quoted :

That it was a case of puerperal insanity of the melancholic type.

That heredity was the predisposing and the effects of parturition the exciting cause.

That the accompanying high fever was the result of an inflammatory process, and not due to the mental disturbance.

That hyoscyamus and morphia combined had no beneficial effect.

That sulphonal is useless in such cases.

That opium was the most efficacious of the remedies employed.

That its discontinuance resulted in injury to the patient.

That removal from the hospital was most harmful.

In conversation with Dr. Jno. Shaw, I was gratified to learn that for years he has been advocating the course I pursued, through an accidental relation.

#### DISCUSSION.

Dr. J. C. SHAW.—I can add nothing to the excellent paper which the doctor has read, except to say a word so far as the treatment is concerned. I was very much interested when he spoke to me about the case and of the effect he had obtained by the use of morphia. For twelve years or more I have used morphia in the depressed mental states, but I have sometimes feared my advocacy of such a remedy before this society might lead some to use it without due care and precautions and do harm, as it must be used with great caution because of the possibility of contracting the morphine habit. The treatment by morphia of the true melancholia is not original with me. I first learned to use it from a French physician, and also from Krafft Ebing ; it is now used by some of the other alienists. In my hands it has proved the best remedy in the treatment of these depressed mental states. It is a decided cerebral stimulant. I have had the opportunity of recommending it to some of my professional friends who have called me in consultation, and frequently had excellent results. My own experience with it in these mental disturbances has been both in private and asylum practice. I first look to see whether the patient has a depressed general nervous condition ; then I give the patient usually not more than a twentieth of a grain to start with, and sometimes a tenth of a grain repeated three times

a day. It is a remedy you can handle easily by using one of Fraser's tablets. This is a great advantage, as it can be given without the patient's knowledge. Frequently you are unable to give these patients any other kind of medicinal remedy. My experience has been that at the very outset we may have a little trouble from constipation, but this soon ceases and you have no further trouble from constipation. This is contrary to the general impression as far as its action is concerned. My patients have had very little constipation, and then only at the very beginning, very soon becoming tolerant of the remedy.

The doctor spoke about the use of hyoscyamine in these cases. Many years ago when I wrote on the use of hyoscyamine, I was soon afterward sorry to find that physicians were using it in a very thoughtless, and, as I believe, unwise way. It is a powerful remedy, and should be used with due care. I never use it in melancholia unless I am driven to it, and then only when no other remedy will make my patients sleep. I generally give a small dose of morphia with it, and the patient always sleeps from that dose and I do not repeat it, and perhaps I will not give it again for several nights, and the next night if it is necessary to use a hypnotic, I use chloral, which can be given with a little stimulant. When I use a depressing remedy, I counteract its depressing effect by giving some stimulant with it.

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## SOME SUGGESTIONS REGARDING THE NATURE AND TREATMENT OF GALACTORRHŒA.

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BY FRANK BALDWIN, M.D.

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Read before the Brooklyn Gynecological Society, Oct. 3, 1890.

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Quain defines *galactorrhœa* as "an excessive secretion of milk." It is well to bear the definition in mind, as much confusion has arisen from the term being used to signify different pathological conditions.

Hirst uses *polygalactæ* as meaning an over-secretion of milk, *hyperlactation* and *galactorrhœa* as meaning respectively a too long continued lactation and an incontinence, or dribbling away of the milk. It seems well to use the term in its generally accepted and more comprehensive application.

Many of the older obstetrical writers make no mention whatever of this disease. Leishmann devotes one page to it, and Cazeaux, Hirst



and Lusk, each less than half as much. The magazine articles on the subject are chiefly reports of individual cases.

Dr. Doe, of Boston, who reports a case in the New York "Journal of Obstetrics," says that he has examined the files of the "Obstetrical Journal of Great Britain and Ireland," covering several years, and could find no mention made of it.

As to the nature of galactorrhœa, I find nothing very definite given in the books. Spielenbergh (1858) says: "We do not as yet know the actual nature of the disorder; the mystery probably lies in the secreting, *i.e.*, in some abnormal vaso-motor condition of the glandular vessels, in an alteration of the pressure in the latter, in some morbid condition of the vascular walls, or in a deficiency of muscular elements or tone in the organ." It is pretty hard to make much out of that. The dribbling of milk has been attributed to a relaxation of the circular muscular fibres of the milk ducts, though Winckel speaks of this condition as a result rather than a cause.

A similar disorder is said to exist in cows, caused by ovarian irritation, and it would seem that at least some cases in the human female may be due, indirectly, to the same condition.

Dr. Garrochs said before the Obstetrical Society of London that he considered many cases to be due to purely nervous causes.

Galactorrhœa may appear at any time during lactation, and in obstinate cases continues for years unabated. In the case of which I shall speak further on, it did not appear before the third month, and produced no serious constitutional symptoms until much later. It has been known to exist in virgins. A few cases have been reported where only one breast yielded an unusual secretion.

There can never be much doubt about the diagnosis; the one important sign is always present in a more or less marked degree.

We have all of us met, in our practice, a temporary increase of the milk supply, especially during the early weeks of lactation. This is the most harmless form of the disorder, and we look upon it as little more than Nature's attempt to adjust the matter of supply and demand, and as soon as the limit of the latter is made manifest the former falls to it and keeps pace with it, until more substantial pabulum is required to sustain the child.

In the more serious forms of the disease there is a marked change in the chemical proportions of the milk. Cazeaux seems to consider this the only form likely to do serious constitutional injury. In this, however, he is certainly mistaken. The most frequent deviation is an increase in the watery constituents and an actual falling off in the amount of fat. The older writers speak of an increase of albuminoids. Either change may work destruction to the child.

It is evident that a drain of so serious a character can not long continue without constitutional symptoms following in its wake. Nervous irritability has been present for some time, and now come insomnia, headache, anomalies of vision and often extreme depression of spirits, amounting to melancholia.

General muscular weakness is marked, attended by dragging sensations in the back, limbs and chest. The loss of fluids from the body causes the urine to show a high specific gravity. Dryness of the throat and fauces is present as in *diabetes mellitus*.

It is a very difficult matter to make a close estimate of the amount of milk which may be secreted in extreme cases, but Winckel says that it may amount to nearly fourteen pints (seven litres) during the twenty-four hours. In a case of moderate severity the leaking is usually sufficient to saturate several towels daily.

The most frequent result from this depletion seems to be *tubercular phthisis*. An added influence in that direction is the constant wetting of the coverings of the chest by the escaping milk.

It would be very interesting to know just what relation exists between a too long or a too profuse lactation and phthisis. These conditions have long been given in our text books as a potent cause of this disease and even the laity seem to have gotten the idea that such is the case, as, during the past year, at my clinic in the Bushwick and East Brooklyn Dispensary, several phthical women have attributed their trouble to one of these causes. I quote the words of an eminent Fellow of this Society, when I say that "all serious abnormalities of lactation certainly favor the production of phthical changes in the lung tissue." Their potency perhaps lies in their destruction of the resisting powers, rather than in any direct injury to the organs of the thorax.

"Nurse's phthisis" is often spoken of in the French text books, and would lead us to believe that it was of quite frequent occurrence among the women of France.

When phthisis does not occur, a condition of extreme, and probably permanent, nervous prostration ensues, known as "*tabes lactea*."

Near the last of November, one year ago, I attended Mrs. I. in her second confinement, and delivered her of a healthy boy weighing about seven pounds. My patient was a handsome blonde, a little above medium height, and weighing one hundred and fifteen pounds. She made a fairly good recovery but suffered some from distention of the mammary glands, making me a little fearful lest an abscess would follow.

On the ninth day of January, she called at my office, suffering from nervous depression, due, as she said, to financial embarrassments,

caused by her husband losing his situation. She also mentioned a slight wetting of her garments from a leaking of milk from her breasts. She was somewhat anæmic. I gave her iron, strychnine and quinine, and an ointment containing belladonna for local use. She improved a little under this tonic treatment, but the dribbling continued. I think it was early in April when she called again to see me, but I was away and another physician gave her the iodide of potash. On the sixth day of May, I was summoned to her residence, and was surprised and alarmed at the change which had taken place.

She was much debilitated. She complained of insomnia, headache, and of objects turning dark before her eyes. I found a well-marked murmur at the apex of the heart; the pupils were dilated. Her appetite was poor, though she suffered much from thirst. Temperature slightly subnormal; pulse about 100. Specific gravity of urine 1030. The symptom, however, which alarmed me the most was a slight, hacking cough, which raised before my imagination the spectre of *phthisis*. I ought to add that she was still nursing a most vigorous youngster, who depended solely upon her supply for support, besides saturating with the overflow of milk several napkins daily. Now what was I to do? All the remedies recommended in the books had been tried and found sadly wanting. She would not listen to the mere suggestion of weaning her child, as hot weather was approaching, and what mother would not jeopardize her own life to protect her child from danger? She herself considered the whole trouble to be due to the anxiety which she had been under for months. Whether I could safely trust her judgment as to cause and effect was a question; but, as it offered the only ray of light, I was bound to be guided by it. I finally gave her the compound syrup of hypophosphites, as the best remedy to allay her nervous fears, which I could see were greatly exaggerated. I also gave her some albuminate of iron to restore the red parts of the blood.

On the fourteenth day of May, some improvement in her general condition was evident. Her whole frame of mind was altered, as her husband had, a day or two before, secured a desirable situation, and her financial difficulties seemed about to be cleared away.

In two weeks more, the cough had disappeared and she was eating and sleeping better. The leaking of milk had ceased. Improvement was continued until her health was completely restored. Recently she told me that even yet, if she became excited, or, as she expressed it, "nervous," the milk would again start from the breasts, though in small quantities.

I am not prepared to say whether it was the medicine which brought about the favorable change, or the lifting of her cloud of anxiety with

its depressing influence on her general health. One or the other tended to relieve her from her condition of neurasthenia, and that was what I was working for.

The case was to me a very interesting one. The fact of the galactorrhœa beginning with, continuing with and disappearing with the state of mental depression, seemed to me significant. I was forced to conclude that the hypersecretion of milk was caused in some way by the neurasthenic condition of my patient. And when we consider the intimate relations which exist between the nervous system and the mammary glands, and how the functions of the latter are affected by the excitation or depression of the former, is this fact a surprising one?

We all of us have had many opportunities for observing how markedly the supply of milk is increased or diminished by hope or fear. The emotions seem to play an important part in governing the milk supply. In other words, is not galactorrhœa in many cases a simple neurosis? Would not this theory explain why it is so often caused by ovarian irritation? If you were to ask me why it is that in one case the milk is increased and in another diminished by anxious fear, I would be obliged to confess that I do not know. The ways of the nervous system are past finding out.

Dr. Gibson, in reporting a case to the Obstetrical Society of London, remarked, with what I presume was a pathetic tone of voice, that he had treated this disease with arsenic, strychnine, quinine, belladonna, iron, iodide of potash and bromide of potash, and each and every one failed to benefit his patient. It is well to observe that there is only one nerve sedative in the list—bromide of potash—and that would certainly be contra-indicated in a serious case owing to cerebral anemia.

In even slight cases it is sometimes found that there is less than a normal quantity of fat present in the milk, thereby endangering the health of the infant. This can best be overcome by increasing the quantity of albuminoids in the mother's food. This is certainly a practical point in the treatment of galactorrhœa.

This paper does not claim to cover the subject of which it treats, but in it I have related some facts which have passed under my own observation, and which I hope will call forth a free discussion and relating of personal experiences which will be instructive to us all.

#### DISCUSSION.

Dr. JEWETT.—I have had no experience, Mr. President, with galactorrhœa or hypersecretion of milk of the degree referred to in the paper. The milder forms, however, are common enough. The views of the author with reference to the pathology of this affection seem to me en-

tirely rational. The disease is doubtless essentially a neurosis. Disturbances of the sympathetic system may very reasonably be regarded as the underlying cause, and, no doubt, they explain the case reported. With regard to the tendency to phthisis in excessive lactation, the opinions expressed in the paper are, I am sure, in keeping with the present views of that disease. The abnormal drain tends to develop one of the factors of phthisis—the soil favorable for the growth and multiplication of the specific micro-organisms.

For the treatment of galactorrhœa the use of belladonna is familiar. I have prepared for the purpose the oleate of atropia as a more elegant and cleanly application than the ointment of the crude drug, and certainly no less potent. In ordinary cases, compression of the breasts is a useful measure, and one that should be tried in the more aggravated forms of hypersecretion contemplated in the paper.

Dr. DICKINSON.—Was there any pelvic examination—anything in the pelvis that would account for the irritation, or any reflex cause?

Dr. BALDWIN.—No; perhaps I should have added that her menstruation did not return for two months after this time.

Dr. SKENE.—You accept the statement that ovarian disease has been looked upon as a cause of this?

Dr. BALDWIN.—Indirectly.

Dr. JEWETT.—That raises another point. It is known that it is not always in the post-partum woman that the milk is developed, but in virgins and in the male, and my impression is where it is done purposely it is by local irritation.

Dr. DICKINSON.—I wonder whether it would be out of place to report a case of an intimate friend, a grandmother, who began to secrete milk without the child being applied to the breast. She is a lady of remarkable intellect, warm sympathies and strong feeling. She is the mother-in-law of a physician in New York, and when his wife died from puerperal peritonitis, she was so much distressed at the way in which the baby refused to take the various foods prepared for it that her sympathies were tremendously aroused, and she found her breasts filling up with milk, although she was forty-nine years of age and had not had a child in twenty-five years. She developed mammary abscess, which had to be opened in both breasts. I know the baby was never applied to the breasts, as is stated to be the case where African grandmothers suckle children, and in which case the secretion is started by the application of the baby to the breast.

Dr. SKENE.—That is an exceedingly pertinent point, because it confirms the neurosis theory brought out by Dr. Baldwin. The only mistake was that she did not nurse the baby.

Dr. MADDREN.—I know a lady who, while nursing, was given a gonorrhœa that produced double pyo-salpinx, and consequently she was obliged to wean her baby. She has not menstruated regularly since, but at long intervals has had what might be called hemorrhages. There is a secretion from both breasts that has continued since the birth of the child fourteen years ago. I have tried everything I could think of, but have not been able to arrest the secretion. In this case of course there is ovarian irritation with the double pyo-salpinx. I was unable to pump out the milk, yet there was a never-ceasing flow.

I know of another case which my friend Dr. Fuller has, which I think you have seen, Mr. President, and which is apropos to the subject, and I have his permission to speak of it. The lady has had galactorrhœa; there is no hypertrophy of the breasts; she has been troubled with a skin eruption, probably an eczema, extending over the abdomen and down, at times, nearly to the knees, caused by the irritating effect of the secretion. When first called to the case he thought it would be an easy matter to arrest the trouble. He tried the simple remedies and they failed. He gave the 30th of a grain of atropine three times a day, and used compression by bandaging and strapping with adhesive plaster; and, I believe at your suggestion, an iodide of lead application, and the tincture of chloride of iron. In fact, he has used all the means that the books or histories of special cases have led him to look upon as likely to afford any relief, but he has been unable to relieve her to any extent. He was not aware of any pelvic complication. The parturition occurred some four or five months ago. When the menstruation returned recently, it was normal and had no effect on the secretion. She has menstruated but once, however.

Dr. DICKINSON.—Has galvanism been used at all?

Dr. MADDREN.—I think not. I did not question him in regard to the state of the patient's mind or nervous system, but perhaps Dr. McNaughton will give us some light on that point.

Dr. McNAUGHTON.—There has not been any mental disturbance except that caused by the loss of the child.

Dr. MADDREN.—Amputation of the breasts was discussed, and the patient was anxious to have it done.

Dr. SKENE.—My attention was called to this patient by Dr. Fuller, who gave me the history of this most curious case. It has been going on now for five months after weaning the child. We have all had trouble, I think, in managing cases where they continued to nurse their children, and when we do not want to stop, but control the secretion, and where it is difficult to use atropine and other agents without getting their effects upon the child. It is not very difficult, as a rule, to control it

after the weaning of the child, hence this is a rare and exceptional case. I suggested the iodide of lead to be applied to the glands simply because, with the exception of that remedy and electricity and amputation, the doctor had exhausted all the agents I ever heard mentioned. I did not have any opportunity to examine the patient, but from appearances she seemed to have been a strong and vigorous individual originally, and I did not think she was suffering as much exhaustion as one would have expected, and yet I may have been entirely mistaken in that. I understood, too, that the quantity secreted was enormous, and that it would saturate a mass of absorbent cotton in two or three hours. Another point is that the secretion is certainly of a morbid character; there is not much milk in it, but it is simply a watery discharge. That leads me to call attention to one point that I have been interested in, and that is the use of the iodide of potash in such cases. Long ago I employed it in a case of a nursing mother whom I suspected of having syphilis, and I gave her iodide of potash in large doses. The effect on her was to increase the secretion of milk and also the vascularity, so I feared inflammation in both breasts, as they were hard and painful. I stopped the iodide of potash, and the pain and engorgement disappeared. I tried it again, and these conditions returned. From that case and others which I have noticed, I am led to believe that iodide of potash merely stimulates gland action, but will probably produce atrophy if used in excessive quantities.

Dr. McNAUGHTON.—I have read somewhere that in such a case as Dr. Maddren mentioned, pregnancy might stop the hypersecretion, and I think before amputating the breasts that might be tried.

Dr. SKENE.—In reference to Dr. Baldwin's allusion to the relation of this condition to phthisis or tuberculosis, I also would like to know if in these cases there is a like tendency to mental disturbance, such as we so often see in perfectly normal prolonged lactation. A mild condition of mental disturbance, apparently a mixture of melancholia and hysteria occurs in many cases of prolonged lactation, especially those who have many children and are either pregnant or nursing all the time. I have seen many of them just on the border line of insanity, and yet I do not recall the fact that any of them had this hypersecretion. The nervous debility or neurasthenia occurs, but this is a little more than that. Has any one noticed such a tendency in prolonged lactation?

Dr. MADDREN.—The lady I spoke of, that has the double pyosalpinx, is hysterical, but that may come from other causes.

Dr. SKENE.—I am interested in the question of ovarian trouble being one of the causes of this secretion. I am thoroughly convinced,

from observation, that mammary gland disturbances are most common in catarrhal endometritis and fibromata of the uterus. I look upon disturbances of the mammary gland as symptoms of growing fibroma, so much so that it is in some cases difficult to differentiate it; not only darkening of the areola, but the papillæ become developed, and sometimes the mammary signs are quite misleading in fibroids and in endometritis where they have gastric disturbance which resembles that of pregnancy, capricious appetite, nausea, etc. There is a gastric disturbance that comes with subacute ovarian inflammation, but I do not remember having noted the excitation of the mammary glands.

Dr. MATHESON.—I have seen but three cases that come under the head of galactorrhœa, which leads me to believe that the disease is a very rare one. These cases were associated with neurasthenia and anæmia. I cannot recollect in any of the three cases any other disturbance. I used iron, ergot, cinchona and quinine; atropia, both externally in the form of belladonna, and internally, in the form of sulphate of atropia. In all cases I had better results with small doses of ergot in combination with tonics than with any other treatment. I used compression with adhesive plaster, and lead plaster in two cases, but I think the conditions improved only as the patient's health improved.

Dr. CHASE.—Did those cases subside when the baby was weaned, or continue for a long period?

Dr. MATHESON.—In two of the cases the flow continued for some little time after the babies were weaned.

Dr. PRATT.—In the case occurring in Dr. Fuller's practice, mention was not made as to the use of ergot. It would seem to me a remedy that was indicated.

Dr. BALDWIN.—I remember a case which two or three years ago came under my observation. I was called to see a child which was suffering from the effects of the changed condition of its milk supply. There was no depression on the part of its mother. The discharge was enormous. I made her stop taking coffee because it supplied the fluid, and it soon diminished after that. I don't know as coffee has ever been considered a galactagogue, but in this instance it seemed to act by keeping the patient in a condition of intense nervous excitement. We all know by experience that porter, ale, and even lager have a very considerable power in that direction, and we often make use of them when the supply of milk is insufficient.



# A CASE OF ULCERATIVE APPENDICITIS ILLUSTRATING AND EMPHASIZING THE NECESSITY FOR EARLY SURGICAL INTERFERENCE.

BY B. F. KINGSLEY, M.D.

San Antonio, Texas.

A case quite in contrast to that reported in the JOURNAL for December by Dr. George R. Fowler, and though terminating fatally, teaching the same valuable lesson of the advisability and urgent necessity for early surgical interference, I believe to be worthy of record.

I was called on the night of June 20, 1889, to see Mr. M. (colored) aet. about 35, bartender, robust and healthy in appearance. I found him with thighs retracted, pulse 150, temperature  $104^{\circ}$ ; bowels very tympanitic, and suffering great pain and tenderness over the entire abdomen, and especially in the right ilio-hypochondriac region. I also found that the trouble had begun several days previously with pain in the right side and constipation, for which he had been attended by another physician who had prescribed purgatives. The diagnosis at this time was general peritonitis. Recognizing the probable origin of the difficulty, an operation was promptly advised, but sturdily refused. There was only partial abatement of symptoms by opium and belladonna freely administered during the following days, and on the evening of June 26th he died. Autopsy, June 27th, 9 A.M. Bowels enormously distended and general suppurative peritonitis, adhesions here and there, the appendix vermiformis lying in the iliac fossa mostly covered by the cæcum and surrounded by quantity of pus. It was ligated and removed and found to contain three large perforating ulcers, the largest 1-2 inch in diameter and empty. Further examination revealed two larger ulcers in the cæcum. The abdomen contained a large amount of purulent matter. The inflammation involved the lower portion of the ilium and the entire cæcum, most actively.

REMARKS—Though the cause of the disease was not made apparent, it seemed clear that the case began as appendicitis, with the probability that the original exciting cause was removed and obliterated by purgatives, while the inflammation already established was aggravated.

The conclusion I am forced to draw from a study of the case, is: That had the disease been more clearly defined in the outset, and the necessary operation promptly done, the life of the patient might, and probably would have been saved.

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## *EDITORIAL.*

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### ANTISEPTIC SURGERY.

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That there is a growing tendency in the profession to belittle anti-septic surgery cannot be denied. Those who are believers in the efficacy of this method will find much to sustain their belief in the results of the practice at St. Luke's Hospital, South Bethlehem, Pa. From a recent report, published in the "Medical News," of one hundred single major amputations performed at that hospital, we learn that there were only seven deaths, or a percentage of ninety-three recoveries. Two of the fatal cases were operated upon during shock, and the other five died from exhaustion, due to loss of blood which had previously taken place. The average number of days spent in the hospital by each patient was 22.6. In addition to these single amputations, there were ten double synchronous major amputations, with three deaths, and two triple ones with no deaths. If these results can be surpassed, or even equalled by any other method, we should be glad to have our attention called to the statistics.

The publication of these cases recalls to mind an address delivered some time ago by Dr. W. L. Estes, Surgeon of St. Luke's Hospital, South Bethlehem, in which he pays a most beautiful tribute to Lister,

and to modern surgery as based on Lister's original method, although much modified. He says: "Lister's great innovation marked the beginning of life-saving in operations, and made possible operative procedures before this quite impossible and never attempted. What a grand monument would that be to the adaptive genius of the great Scottish surgeon, if all the human beings whose lives have been saved by methods suggested and made practicable by his discovery should bring one single stone of one cubic foot dimension, and with her or his name and the operation performed inscribed thereon, and add it to the pile which should rear its head far towards heaven to declare to all generations some meed of his greatness!"

In another portion of this address, entitled "Medicine To-Day," Dr. Estes, in a very concise way, rehearses so well some of the results of antiseptic surgery, that we publish an extract in the "Miscellaneous" columns of the Journal.

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#### RED CROSS SOCIETY.

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The training of nurses has advanced to such a degree in recent years that no person able to pay, need suffer for the want of nursing, and that of the very best quality. Not so much, however, has been done for those who cannot pay for such services, and it is with great pleasure that we direct the attention of the profession to the provision which the Red Cross Society of Brooklyn has generously made to meet this very need. The district nurse of this Society is in readiness to answer calls for her services. At the request of the physician attending the case, she will visit the sick poor, carry out instructions for treatment or nursing, and in every way co-operate with and assist the physician. Her services are free, and intended only for those who are unable to employ a nurse. Calls from any part of Brooklyn may be sent by postal or telephone to the Directory for Nurses, 356 Bridge Street.

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#### MAJOR PELVIC TROUBLES DUE TO MINOR GYNÆCOLOGY.

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From a discussion which recently took place in the Philadelphia County Medical Society, it would appear that the minor gynæcologists in and around that city are persistently causing pus tubes and peritonitis by the use of the uterine sound, curette, dilator and electricity, and that the major gynæcologists are kept running hither and thither to

save, by laparotomy, the lives of the unfortunate victims of the minors. The situation is certainly a sad one, and anything but creditable to the minor gynæcologists. We sincerely hope that this charge against the minors may be met by them and the disagreements amicably adjusted, else the name by which this ancient city is generally known—the City of Brotherly Love—will, so far at least as the medical profession is concerned, soon cease to be applicable.

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### PRIVATE AUTOPSY ROOMS.

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An enterprising firm of New York notifies the medical profession that they have arranged a house in that city, not only with funeral parlors and a chapel, but also with rooms in which autopsies may be held. These rooms, fitted up with all conveniences and with competent assistants in attendance, are placed at the disposal of the medical profession without charge.

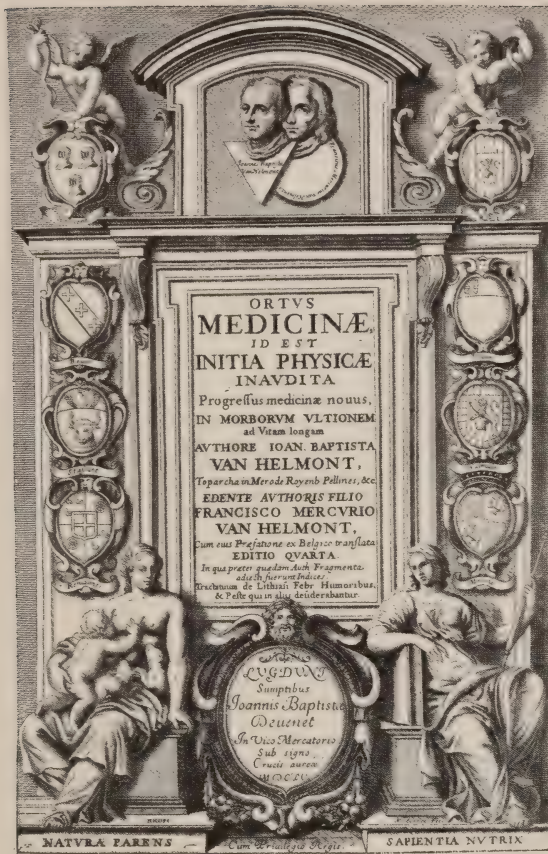
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### MEDICAL SOCIETY OF THE STATE OF NEW YORK.

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The medical event of the past month was the eighty-fifth annual meeting of the State Society, at Albany. Brooklyn occupied, as usual, a conspicuous position. L. S. Pilcher served as Vice-President; A. N. Bell was a member of the Committee on Hygiene, and Arthur Mathewson of the Committee on Medical Ethics. The following papers were presented by Brooklyn physicians: The Technique of Operative Interference in Appendicitis, by George Ryerson Fowler; Pathology of Pelvic Inflammations, by Alex. J. C. Skene; The Duties of the State in the Light of Our Present Knowledge of Pulmonary Tuberculosis, as to its Etiology and Therapy, by Paul H. Kretzschmar.

One of the most important things done by the Society was to name fourteen physicians from among whom, according to the new law, Ch. 507, Laws of 1890, which goes into effect September 1, 1891, the Regents of the University of the State of New York must select seven to act as State Medical Examiners. The following gentlemen were selected by the Society for this purpose: Drs. W. C. Wey, B. F. Sherman, W. W. Potter, W. R. Ely, George F. Shradly, J. P. Creveling, L. S. Pilcher, Edward B. Angell, George R. Fowler, H. D. V. Pratt, C. L. Dana, Eugene Beach, V. P. Gibney, M. J. Lewi.



JOHN BAPTIST VAN HELMONT.

THE SECOND GREAT CHIEF OF THE CHEMICAL PHYSICIANS.

This curious plate is the title-page of the fourth edition of his collected works, published immediately after his illustrious parent's death, by the son, whose portrait is united with that of the father at the top of the page, to whom he bequeathed it, a few days before his death, in these words:

"Take all my writings, the crude as well as the finished ones, and join them together; to your care I commit them; do with them what you think good; for so it has pleased Almighty God, who directs everything to the best purposes."

This plate is a fair type of the frontispieces which decorated a great number of the medical as well as other works published during the sixteenth and seventeenth centuries, during the golden age of plate engraving. It is taken from the handsome folio edition of Helmont's works, which is one of the treasures of the writer's library.

Van Helmont's works are now consulted only as curiosities; but he certainly anticipated, in obscure glimpses as it were, several of the important discoveries as well as the hypotheses of modern times. His *Archæus* is now the *vis medicatrix na uræ* of Hoffman and Cullen; his doctrine of ferments was adopted by Sylvius and his followers, and he greatly cleared the way to chemical discoveries.

The Galenical doctrines of the four elements, four qualities, four degrees and four humors, with the method of curing by tempering these degrees, he clearly and directly proved to be false and insignificant.

Though he was a believer in spontaneous generation, and claimed to have seen and touched the philosopher's stone, Van Helmont was neither a fool nor a madman; but while he certainly had in him a strong mixture of enthusiasm, was nevertheless very acute, very profound and a man of great learning.

He seems to have been the first to have noted the "spirit of hartshorn," the spirit of sulphur, *per campanum*, as it was called, the aerial part of spa-waters, which he first denominated gas (being the first to use the name, from Geist, a ghost or spirit). He attempted to reduce the whole system of medicine to the principles of chemistry, and substituted a jargon as unintelligible and hypothesis as gratuitous as those he had attempted to refute.

He died December 30, 1644.

A contemporary thus speaks of him: "Helmont, for I knew the man, was pious, learned, famous, a sworn enemy of Galen and Aristotle. The sick never languished long under his hands, being always either killed or cured in two or three days. He was sent for chiefly to those who were given up by other physicians; and to the great grief and indignation of such physicians, often restored the patient unexpectedly to health."



## PROCEEDINGS OF SOCIETIES.

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### BROOKLYN GYNÆCOLOGICAL SOCIETY.

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A regular monthly meeting of the Brooklyn Gynæcological Society was held at the Society rooms, 356 Bridge Street, on Friday evening, June 6, 1890, at 8.30 o'clock.

Present: Drs. Byrne, Skene, Maddren, Frank Baldwin, McNaughton, Matheson, Butler, Emery, Chase, Langstaff, Wallace, Stuart and L. G. Baldwin. Dr. Byrne in the chair.

The minutes of the previous meeting were read and approved.

#### PRESENTATION OF INSTRUMENTS.

Dr. SKENE.—Mr. President: I would like to present an instrument; not a new one, sir, but one that has been slightly modified, and employed, I think, for a new purpose—I refer to the needle forceps. In place of using one needle forceps for introducing sutures in deep cavities, as in operating on the cervix uteri, I employ two forceps; and if I will not take too much of the time of the Society, perhaps I might begin at the beginning and show the instrument formerly used, and then show the new one.

I ought to apologize for going back to first principles, but I believe, Mr. President, anything at the present time to be scientifically stated must be done according to the law of evolution. A man that gives a lecture on hang-nail has to begin by saying that it is a lapse back to the lower type in which the hair of the foot hangs over the claw. So I will go back and show you the forceps, with which you are all familiar, which I formerly used. This instrument, the one I have used for many years, is a slight modification of the ordinary needle forceps, which was made in this way. I found if I had a forceps that would hold a needle without turning in the process of introducing the needle, if I withdrew the needle with the same jaws it would be very apt to break it. So I had a double-ender made that held the needle without slipping, so that when the needle was introduced and the forceps locked, it could not move. Then to remove the needle without dulling it, I used a copper-faced pair of jaws. I introduced the needle with one end of the forceps, and then reversed the forceps and grasped the point with the copper-faced end. However, in order to make counter-pressure it was necessary to use a counter-pressure instrument. The tenaculum was first used for this purpose, but afterward the ring of Emmet.

After introducing the needle and then letting it go and trying to seize it over the counter-pressure instrument, it sometimes gets away from us, especially in a deep cavity, with a poor light and a short needle, and we sometimes lose a little time in finding it, and after it is withdrawn we have to drop the needle to bring the counter-pressure instrument off the needle and thread. I tried to overcome this difficulty by having it open, but did not succeed.

So I adopted the plan of having a forceps that would answer the same purpose as a counter-pressure instrument, and that would grasp the point of the needle and withdraw it. That is the principle of the instrument. It is not new, but it is slightly modified by having an end which completes the fenestrum—a projecting end from one of the jaws so that it will catch the needle and keep it from slipping, guide it, and withdraw it.

(The doctor then demonstrated the use of the instrument by making a number of stitches through a folded towel.)

I have also found this instrument very beneficial sometimes when we have to introduce a continued suture in the abdominal cavity.

I may say that there was, in addition to the other objections to the double-ended instrument already stated, a further objectionable feature—the difficulty of keeping it clean. There was no way that it could be taken apart, whereas the single-ended one can be taken apart with the greatest facility, because it has a joint that is easily unlocked. I would also say that this instrument is an imperfect one; I have changed the mechanism of it entirely and gone back to the old-fashioned scissor handles with the bent shanks, so that in using it the handle is out of my light. The perfect instrument with this modification is now in the hands of the maker.

THE PRESIDENT (Dr. Byrne).—It seems to me that the advantage of using two needle-holders in these operations instead of one, whatever the needle-holders may be, is so very great that I have no doubt that it has been quite frequently done. There is a great advantage in having something to catch the needle before you release your hold of it with the forceps which is used to pass it through.

It occurs to me that there is an additional advantage in this instrument described by Dr. Skene—that it is not necessary to drop your needle. As much as a minute or two has often been lost in dropping and getting your needle again into proper position in your handle, but with this device you need not lose your needle at all; it will always be in one forceps or the other.

I would like to ask Dr. Skene if he has seen the peculiar needle-holder which has been introduced by Mr. Kersten, the young man who is in the instrument business in Joralemon Street.



Dr. SKENE.—Yes, sir; it is on an entirely different principle from the ordinary needle-holder.

Dr. BYRNE.—I used it in an operation and found it a good needle-holder and one that seems to present practical features, and I would like to avail myself of its advantages.

Dr. SKENE.—I may say still further, Mr. President, that long before thinking of this I had used the two forceps in superficial wounds where I could see the point of the needle, but in a deep cavity the end of the forceps is so formed that the needle will be guided into what is really a fenestrum. This is an advantage, because if it enters there at all while you are making counter-pressure you have simply to shut your forceps to catch it, whereas with the open jaws you sometimes slip over it. Of course, the two forceps have been used by many, but the closing of the end is the modification. It has really no great advantage except as a counter-pressure instrument, and making sure of seizing the needle, which is an advantage in deep cavity operations.

The projecting point which completes the fenestrum is not found to be in the way at all. It is very dull, and does not project far, and if it should catch on the walls of the vagina or abdominal cavity it hardly does harm, provided the instrument is the one with the ordinary scissor handles, bent down so that when you are making counter-pressure your hand is entirely out of your light. I will show the perfected instrument to the Society when I receive it from the maker.

Dr. BYRNE.—The device which I used for many years for counter-pressure is made of hard rubber at the end, with a central perforation and depression which does not injure the point of the needle any because it strikes it. It has got a funnel-shaped entrance to the central hole, so that it slides in very easily, and as a counter-pressure instrument is far superior to any I have seen in the shops.

It has been noticed by all that it is very desirable sometimes to have the handle or shank of the counter-pressure instrument made of material which will permit one to bend the shape of it a little, especially in vital operations; and in that respect rigid instruments are sometimes awkward to handle in deep cavities.

Dr. SKENE.—Just as firm pressure can be made with the bent handles as with the straight ones. You hold it with the thumb and second finger in the rings of the handle, and then with the forefinger extended along the side you can make all the pressure necessary.

Dr. STUART.—I have a needle forceps that I had made to use in connection with Dr. Skene's forceps, with the scissor handles, and I found them extremely convenient. When you hold them as scissors, you put the needle in with very great positiveness even in the densest tissues, and there is no twisting as there is with the other instruments.

You can also make much better counter-pressure with the scissor handles, but I should suppose it would be desirable to have some stop to prevent you from closing the opening where you want the needle to enter—the fenestrum of the forceps; your mind being on the manner of introducing the needle, you might unconsciously close the handles, which the pushing up of the slide obviates. Perhaps if you introduced your finger between the blades and held it open, it would be an advantage.

Dr. SKENE.—I found that to be the case when I first began to use the instrument. The first time I tried it, I found the moment I began to make counter-pressure I closed it, but after being caught a number of times in that way, I then put my finger between the blades, so that if I closed it I pinched my own finger, and a very little practice overcame this tendency. It would, however, be a very easy matter to have a stop introduced, pushing it up to close it, and pulling it down to open it.

One might imagine that the saving of a few seconds on a stitch would amount to very little, but when you come to have a number to put in, the time is all valuable. I have been driven to use every means to shorten operations, because of an idea that I have that prolonged anæsthesia with any kind of an anæsthetic is objectionable. As soon as anæsthetics began to be used, surgeons operated more slowly; they think nothing about ten or fifteen minutes if the patient is not suffering, and yet I find that if anæsthesia is kept up more than an hour the patient's convalescence is not always so good. I may be something of a crank on that subject, and as we are all liable to see what we are looking earnestly for, I may have seen more disturbance from prolonged anæsthesia than could be honestly and fairly attributed to the anæsthetic; yet when I take twenty operations that fall short of an hour and compare them with twenty others that were over that time, and then watch the record of convalescence, there is a decided difference. That might be attributed by many to the fact that the cases that took a long time were worse cases. But taking the same cases, there are some days when one can operate rapidly, and the next day do the same operation, not any more difficult, and get out of patience or perhaps get into that condition which we have all experienced without being able to describe it, when "things go wrong"—we don't know why, but needles seem to be more brittle and break, and somehow the instruments seem duller. Taking all this into account, I certainly believe that prolonged anæsthesia does interfere to some extent with the healing process, and hence anything that will save a moment's time is more valuable than the mere saving of the time of the surgeon.

Dr. BYRNE.—It seems to me your remarks tend in a conservative direction, which I do not think any one can appreciate more than I, for I never gave an anæsthetic for a tedious operation, or one likely to be, without feeling uncomfortable until it was over. I have made a rule for years to induce every patient that can muster courage to go through operation without an anæsthetic if it is possible to do it. You can never tell how a patient is going to make out, and in my opinion the length of time that the patient is under the anæsthetic greatly retards the recovery and the progress of it afterward. I have noticed it over and over again, and I do not believe it is due to the fact of the operation being more carefully correct or more prolonged. I think it is due to the anæsthetic entirely; and although I have never yet lost a patient by anæsthesia, I have had them so near death that I did not get over the fright for a good while.

As Dr. Skene has said, since the introduction of anæsthetics we are apt to take things too leisurely and forget that every moment that the patient is under the influence of this drug is of vast importance to her.

## EXECUTIVE SESSION.

The proposed form of By-Laws as already read, and partially adopted, was taken up.

On motion, duly seconded and carried, the By-Laws, with the exception of Section 5. of Chapter IV. (relating to the social features of ordinary meetings), were adopted as read, and ordered printed, the above-named section being omitted.

On motion of Dr. Skene, duly seconded and carried, the Treasurer was appointed a committee of one to report at the next meeting in regard to the probable cost of providing entertainment at the regular meetings.

It was

*Resolved*, That the Secretary be requested to prepare an alphabetical list of members, said members to present papers in accordance with this list (excepting those who have already presented papers during the present year).

The matter of electing a Pathologist, as provided for in the By-Laws, was discussed; and, on motion, Dr. Joshua M. Van Cott, Jr., was nominated (to be balloted for at the October meeting), and the Secretary was instructed to communicate with him, and request that he act in the capacity of Pathologist to the Society.

The following resolution was unanimously adopted:

*Resolved*, That in view of the recent organization of the Society, the next annual election be postponed until October, 1891.

There being no further business, on motion, the meeting adjourned.

L. GRANT BALDWIN, *Secretary*.

# PROGRESS IN MEDICINE.

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## SURGERY.

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BY GEO. RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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### CLINICAL AND EXPERIMENTAL STUDIES UPON SUTURE OF THE BLADDER AFTER SUPRA-PUBIC CYSTOTOMY.

E. H. Dietz (Thèse, Paris, G. Steinheil, 1890; *Centralblatt f. Chirurgie*, No. 50, 1890). The review by Wagner, of Leipsic, of Dietz's experiments upon animals, and his observations based thereon, as well as upon 47 clinical cases, including two by Tuffier not heretofore published, gives the following as the conclusions to which D. has arrived :

1st. The bladder may be immediately sutured in those cases in which both bladder and kidneys are healthy, and in which the edges of the abdominal and bladder wound are clean and smooth, and in which a more stringent antiseptic procedure is possible.

2d. Catgut is to be preferred, which will maintain its integrity for at least ten days, by which time a firm union will have taken place. The method of suture may be carried out according to the views of the operator.

3d. In those cases in which the asepsis is certain, both bladder and abdominal walls may be closed at once, primary union resulting.

4th. In case this latter cannot be assured, the abdominal wall should not be sutured, but packed with gauze or drained.

5th. The bladder is to be regularly emptied, either by means of the permanent catheter or by regular catheterization.

6th. Suturing the bladder is the most certain means of avoiding urinary infiltration and the occurrence of urinary fistula.

7th. Should the bladder unite by primary intention, the duration of the treatment amounts to an average of but eighteen days; primary healing, during the past ten years, occurred in about two-thirds of all cases reported (64.28 per cent.).

8th. The bladder cicatrix, under these circumstances, is capable of permitting normal distention of the bladder, and offers as firm a resistance as the balance of the viscus.

9th. In cases of resection of more or less of the bladder mucous membrane, save at those points where the ureters enter, suture of the bladder walls likewise gives good results.

TREPHINING OF THE PELVIS IN THE TREATMENT OF CHRONIC ABSCESSES OF  
THE ILIAC FOSSA AND OF THE PELVIS.

Terrillon (*Bull. et Mém. de la Soc. de Chir. de Paris*, t. xv., p. 690) In order to meet the indications for perfect drainage in those cases of large abscess in which the pus tends to burrow into the lesser pelvis, T. recommends trephining of the pelvis at the most dependent point of the abscess cavity. For this purpose he separates the soft parts posteriorly to and above the trochanter major by means of an incision 6 cm. long, which passes directly down to the bone. The pelvic bony wall posterior to the acetabulum and above the spine of the ischium perforated with a trephine. A finger is introduced into the abscess cavity through an incision made above Poupart's ligament, and by means of this passed to the bottom of the former a guide is afforded for the crown of the trephine in its passage through the bone. The drainage-tubes passed through the opening thus made are to be retained in position until the cavity of the abscess is completely filled with granulation tissue, or at all events until the latter is closed off from the lesser pelvis.

VENTRAL HERNIA.

Von Bergmann, Berlin (*Centralblatt f. Chirurgie*, No. 48, 1890). At the sixty-third meeting of German Naturalists and Physicians, von Bergmann called attention to a form of small hernia occurring between the ensiform cartilage and the umbilicus which occasionally escapes diagnosis and leads, when unrecognized, to symptoms apparently pointing to grave gastric affections. The important points relate, 1st, to the location of the tumor, it being usually found to exist at one of the transverse tendinous markings of the rectus muscle; 2d, these are invariably omental protrusions, rather than lipomatous masses; 3d, the seeming absence of a hernial sac suggests a doubt as to the existence of a hernia.

König (Göttingen) suggests that the pains, etc., usually referred to the stomach itself in these cases, are to be explained by the tension exerted upon the omentum in the neighborhood of this organ.

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OBSTETRICS.

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BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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CÆSAREAN SECTION IN ECLAMPSIA.

Halbertsma (*Nouv. Arch. d'Obstet. et de Gyn.*, Dec. 25, 1890). The prognosis of eclampsia occurring before labor is generally admitted to

be extremely grave. According to Schauta the maternal mortality in forty-two cases of eclampsia during pregnancy was fifty per cent. Forty-two per cent. of the children were lost. Stumpf under the use of narcotics and warm baths had a maternal mortality of seventeen per cent. and an infant death rate of seventy-seven per cent. Three women died undelivered. True, Veit says no woman should die of puerperal eclampsia, but he has himself lost two. In consideration of the high mortality of puerperal convulsions during pregnancy H. proposes Cæsarean section for cases in which labor does not declare itself after the eclamptic seizure. He has operated twice in eclampsia saving the mothers and both the children. In all, six operations have been done in Holland on this indication. Only one woman was lost and she was in extremis before operation, and no uterine sutures were used. One child only died and that was delivered at the beginning of the eighth lunar month. Most remarkable was the influence of the operation upon the convulsions. Out of five patients in whom the seizures were violent before delivery one only had three slight attacks subsequently. H. does not attempt to answer the question whether Cæsarean section is more dangerous before labor. He is disposed to think it is not. Of ten cases operated by Treub before labor two only died and in these there were complications which were largely responsible for the deaths.

The author would reserve the abdominal section, however, for cases in which the labor is not established after the eclamptic seizures or in which the pelvis is contracted. When the supra-vaginal portion of the cervix is obliterated, less formidable procedures should be preferred. Incisions of the cervix as practised by Dührssen are then indicated. The paper closes with the following conclusions :

1. In eclampsia at the end of pregnancy, simple operative measures should be substituted more frequently than they now are for narcotics and warm baths.
2. In desperate cases with complete anuria grave procedures are justifiable.
3. The woman should never be allowed to die undelivered.

#### TREATMENT OF ABORTION.

Winter (*Nouv. Arch. d'Obstet. et de Gyn.*, Dec. 25, 1890). Brennecke, Heinricius and Dührssen believe that the retention of the decidua after abortion exposes the patient to secondary hæmorrhage, endometritis and irregular involution. On the other hand Schroeder, Winckel and Olshausen have held that the decidua when left in no way interferes with the normal course of convalescence. Winter makes a contribution to the solution of this question, based on the study of

one hundred cases of abortion carefully observed and repeatedly examined. Entire removal of the decidua with the curette was followed by prompt and complete recovery. The lochial flow lasted about eight days and the menstrual function was resumed at the end of four weeks. In another group of cases the entire decidua was allowed to remain in utero after abortion. The lochia lasted somewhat longer but recovery was speedy and no less complete. In a third group of cases a portion only of the decidua was retained. The treatment pursued consisted in the removal of the floating shreds of decidua, the adherent portions being left undisturbed. In the most of these cases the lochia lasted eight days without putrefaction and the convalescence was in all entirely normal. Subsequent pregnancies occurred in thirty-eight per cent. of the cases in which there had been partial or total retention, and in twenty-nine per cent. of those treated by complete removal of the decidua. In cases in which hæmorrhage and endometritis ensued half detached and decomposing shreds of decidua and in some instances chorial villousities were found in the uterus and to these the morbid conditions were attributed. These accidents occurred most frequently in abortion at the second month. The practical conclusion is that the function of the curette after abortion is the removal of the semi-detached shreds of decidua, or other floating débris. Adherent decidua in no wise impedes recovery.

#### THE RELATION OF RENAL DISEASE TO ECLAMPSIA.

Herman (Br. Med. Jour.). At a recent meeting of the Obstetrical Society of London Dr. Herman reported four cases of pregnancy with grave renal disease but no eclamptic seizures. He commented upon the importance of comparing such cases with those in which eclampsia occurred, in order to a better knowledge of the relation between kidney disease and child-bed convulsions. In a previous paper he had collected all the observations he could find recorded on the normal urea excretion during pregnancy and the lying-in period. The results were contradictory and no definite conclusions could be drawn. There was very little evidence, he thought, in that or other studies of the subject for or against the theory that puerperal eclampsia and uræmic convulsions are identical. He did not believe that in the four cases referred to the albuminuria was the simple result of pressure. Yet it was most marked in the cases in which the distention was greatest. Moreover a diminution of the albuminuria and an increase in the urea excretion immediately followed delivery in all.

In course of the discussion Dr. Napier quoted Seyfert to the effect that of seventy patients suffering from kidney disease during gestation only two developed eclampsia. In another series of one hundred and

fifty-two cases in which autopsies were made on puerperal and pregnant women who were found to have Bright's disease only about six and one-half per cent. had developed eclamptic symptoms. Braun estimated that about sixty per cent. of women having acute or chronic Bright's disease during pregnancy developed convulsions.

Napier believed that all cases of albuminuria whatever the cause were relieved after labor.

Doran remarked that there appeared to be three diseases clinically distinct:

1. Albuminuria associated with ovarian and other abdominal tumors.
2. Albuminuria of pregnancy.
3. True Bright's disease complicating abdominal tumor or pregnancy.

In the first albuminuria always disappears after the removal of the tumor. In the second eclampsia often occurs. The condition of the patient is always better for the removal of the tumor or for delivery.

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## PRACTICE OF MEDICINE.

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BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital; Physician to the Department of the Chest, Brooklyn City Dispensary.

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### MARIANI WINE.

The officinal preparation of coca, the extractum erythroxyli fluidum, may be given in doses of from ʒ ss - ʒ ii. The use of this preparation is not always satisfactory. After employing the remedy, the thought has been suggested that perhaps the nature of its composition did not tend to overcome the local sedative action of coca upon the mucous membrane of the stomach. A preparation made differently, containing more of an alcoholic principle, might, theoretically, overcome this difficulty. It is possible that the article familiarly known for many years as "Vin Mariani" has the requisite composition. It has been used, as noted in printed records, for diseases of the mouth, throat, stomach, general neurasthenia and pulmonary tuberculosis. Its use has been suggested in forms of cardiac disease. This note has been written to record the successful use of the preparation in cardiac irritability due to the irritation from the non-elimination of urinary products, as shown by diminution of urea. *The heart here is frequently in a condition of tremor cordis, and marked muscular debility often remains after the*



*function of the kidneys has become more normal.* Mariani wine has in our experience proved most beneficial *in restoring and saving muscular force, and thus furnishing a better organ upon which other drugs may act more favorably.*

## THE FLOATING KIDNEY.

Kuttner (Berliner klin. Wochenschrift) regards the floating kidney as one which may be detected by palpation. Four abnormal conditions may be found :

1. A kidney moving on deep inspiration.
2. A kidney two-thirds of which can be felt; the amount of displacement is slight.
3. A kidney all of which may be felt and which may be moved in all directions.
4. A kidney the position of which is abnormal.

In this paper, most valuable for the statistics which it offers, the method of the consideration of the ætiological factors is open to great criticism. It is stated that loss of fat in the renal capsule may be a cause, and further that movable kidneys are one not uncommonly met with in disease attended by extreme emaciation. Among these are mentioned phthisis pulmonalis. It has not been our personal experience in a long study, clinically and in the post-mortem room, to find such condition. Cases have been met with where the loss of both fat and muscular tissue has been extreme, the diaphragm (an excellent guide to the condition of the muscles throughout the body) being constantly found as a mere membrane. In no one of these cases was the kidney found changed in position. According to the author, the disappearance of the fat leaves a network in which the kidney may move, but from which it receives no support. From lack of support the position of the organ becomes changed. The diaphragmatic movements and the position of the upper abdominal organs aid in the displacement. Among other causes are mentioned tight lacing, frequent pregnancies, abortions, pendulous abdomen, and renal hyperæmia in connection with menstruation. 667 cases have been analyzed by the author; 584 were in female patients, 83 in males. The most common period of life was between thirty and forty years. Seventy-five per cent. of the cases were on the right side, the liver having much to do with this position.

In some cases there are no symptoms. There may be present, however, dragging or heavy pains (being paroxysmal in character or neuralgic), nervous phenomena, digestive disturbances and sometimes icterus. The urine in some cases may contain albumen. These patients have at times sudden attacks of abdominal pain. Fever, with nausea

and vomiting, is sometimes present. This has been thought to be due to a localized peritonitis.

Anodynes must be used for the pain, support given to the abdomen, and operative measures resorted to in extreme cases.

[NOTE.—To the above is added the history of a case which has lately come under our observation in hospital practice. The patient was an unmarried woman of Polish nationality, twenty-six years of age. Sixteen months before admission to the hospital she had noticed a swelling considerably above the umbilicus on the right side. Immediately upon finding this swelling, the patient commenced to lace. The greatest possible amount of pressure had been brought upon the parts. This had not caused the swelling to disappear. Upon admission, a line of deep excoriation was found to have resulted from the tight lacing. When in the recumbent position, a rather pendulous abdomen was presented, with some fat in the abdominal walls. A cursory palpation of the abdomen revealed no abnormality. By gently crowding up the fingers under the ribs on the right side, keeping time with the respiratory movements, a solid mass was found. Upon moving the convexity of the hand toward the diaphragm and making pressure, the mass quickly descended below the ribs, in which position it could be definitely mapped out. It was possible to surround it with the hands and to feel the various portions of the organ. When the kidney was held in a parallel position with the median line of the body, its external border being directed upward, the convex surface appeared smooth, there being no unevenness. The same condition was noticed at the two extremities. The length in this position was about five inches. The concavity at the internal border was slightly apparent. No attachment of any kind could be felt. The organ could be pushed *up* above the ribs, *down* to just below the umbilicus, *across* to the left side of the median line, *backward and to the right* until it disappeared. It had no connection with the liver. When the tumor was pushed down, a clear space of resonance could be detected between it and the liver. Upon examination the kidney frequently would move well back in the abdominal cavity, so that it could not be felt. When the patient sat up or coughed violently, it again descended. When the patient was in bed in the recumbent position and changed to the right or left lateral, the tendency was for the organ to move backward, as if the abdominal walls and intestinal coils had fallen in front of it. The kidney moved more freely up than down. The patient complained of no pain while the examinations were being made, with the exception of when the organ was pressed between the hands. There was no tenderness at any spot over the abdomen. The urinary secretion was normal

after the first few days. It then contained a trace of bile. There was but one symptom pertaining directly to the kidney. This was pain of a dull character occasionally. It was more severe during the catamenia and during any digestive disturbance, such as constipation. The patient was of a neurotic temperament. Abdominal support was given without relief; and the symptoms not being urgent, surgical interference was not recommended.—H. C.]

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## OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

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### GLIOMA RETINÆ.

Lawford and Collins (Roy. Lond. Oph. Hosp. Reports, Dec., 1890) have collected and analyzed sixty cases of this disease. In a slight majority the patients were males. When unilateral, the left eye was more frequently involved, both being affected in from twenty to twenty-five per cent. More than one-half the cases occurred in children under two years of age, and the oldest was seven years. Hirschberg has, however, reported four older cases, one at nine, two at ten and one at eleven years respectively. On account of a case reported by Vetsch, in which a secondary gliomatous growth occurred in the parotid gland after three years, the authors of the paper fix three years as the shortest limit of permanent recovery. According to this test eight of the sixty cases recovered after operation, and in each of these microscopical examination showed the growths to be undoubtedly gliomatous. In these eight cases the average duration of life up to the time of writing was a little over eight years, and the average time from the observance of the growth to operation was somewhat less than eight months. In one successful case both eyes were enucleated, and no return of the growth had occurred within three years. This and Agnew's case (reported in the *Trans. Am. Oph. Soc.*, 1888, p. 109) are probably the only reported cases of permanent cure after double enucleation for glioma.

The authors mention twenty-five successful cases collected from the literature, in some of which, however, no microscopical examination was made of the growth. One of these is remarkable in that a recurrence occurred in the orbit, and the patient was alive and well at the time of the report, four and a quarter years after the second operation.

In the fatal cases reported by Lawford and Collins, the longest duration of life after double operation was eight months, counting from the removal of the second eye. When one eye was affected, the longest duration of life was fourteen months. Recurrence in the great majority of cases occurred in the orbit. The average interval between the discovery of the growth and removal of the eyeball in sixteen fatal cases was fourteen months. This, it will be seen, is decidedly longer than in the successful cases, and indicates the importance of early operation. In no instance was more than one member of a family affected.

#### INTRAOCULAR CYSTS.

Collins (*Id.*) describes in an interesting way the various forms of intraocular cysts, and cites illustrative cases. He first considers those due to the implantation and subsequent development of epithelial cells, these cysts occurring in the cornea, anterior chamber or iris. They are preceded by injury, usually a perforating wound, by which some of the corneal epithelium is carried into the eye. It may here proliferate, and the resulting mass of cells either form one of the epithelial pearly tumors sometimes seen in the iris, or by breaking down and liquefying at the centre a cyst may develop having an epithelial wall. The nature of the contents of these implantation cysts would vary with the nature of the implanted epithelium, and it is not surprising to find them occasionally multiple. They may easily reform after simple puncture or attempts at removal. These cysts, as a rule, develop in the iris or anterior chamber, though sometimes in the cornea. We meet occasionally a development of vesicles or small cyst-like spaces in the corneal epithelium, notably in staphylomatous or old glaucomatous eyes. Besides the above-described implantation cysts which may be regarded as epithelial, delicate cysts are sometimes met with in the iris, having membranous walls and a single endothelial layer lining their cavity. They may follow injury to the eye, not necessarily a perforation wound, or may occur spontaneously, and Schmidt-Rimpler has ascribed their development to the closure of one of the crypts normally present in the anterior surface of the iris. A lymph current passes from the iris vessels through these crypts to the anterior chamber, and closure of the crypt would lead to its distention by accumulated secretion. The endothelial lining of the crypt becomes the lining of the cyst.

Cysts may also be formed after injury or inflammation by the development of synecchiæ and a localized condition of bombé iris, or by a separation of the two layers of the pars retinalis iridis (Schwalbe) and the accumulation of fluid in the space between them. Collins

describes a very interesting case of this sort. There are also certain congenital cysts of the iris, often associated with other developmental defects.

Cystic spaces in the anterior part of the retina between the elongated Mueller's fibres are very common in elderly people, and have been described at length by Kuhnt. Cysts looking like white currants adherent to the outer surface of a detached retina are less common, but were found by Collins in nine cases within two years. The development of these cysts is always preceded by œdema of the retina, probably due to changes in the optic nerve sufficient to interfere with the venous return. The formation of such cysts would naturally be facilitated by separation of the retina, by which its firm support on either side is removed. In conclusion, the author cites a very interesting case of retinal cyst observed with the ophthalmoscope, and which he believes to have been a lymph nævus.

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## DISEASES OF THROAT AND NOSE.

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BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

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### FORCIBLE DILATATION IN TREATMENT OF ANTERIOR NASAL STENOSIS.

Dr. William Hill (*Jour. Lar. and Rhinal.*, vol. iv., No. 10) advocates the method of Hewetson. Instead of reducing nasal obstruction by means of galvano-cautery, saws or drills, an instrument resembling a large steel glove stretcher is used. The enlargement is obtained by crushing the turbinated bones, or in some instances displacing a deviated septum. No untoward effects have resulted, although occasionally the bony partition between the antrum and nasal fossæ had been bulged out and fractured. This method is serviceable where other procedures fail, especially in those complicated by alar collapse. After reduction of turbinated hypertrophy by ordinary operations, alar collapse frequently impairs the result. This is generally caused by a stenosing and contracting band, situated on inner surface of ala, at a point between the vestibule and nasal fossæ proper. In such cases the forcible dilator has given excellent results.

In a case of anosmia from obliteration of olfactory apertures caused by excessive hypertrophy of both middle turbinated bones, smell returned on crushing the enlarged bones to ordinary dimensions. This method, author had used in twenty-one cases with excellent results.

## DEMONSTRATION OF LARYNGEAL MOVEMENTS.

F. Hooper (Berlin Med. Congress). In slightly etherized animal, irritation of the recurrent produces closure of the glottis and dilatation if deeply etherized. If the recurrent nerve be cut and its peripheral extremity irritated, the same result will be obtained. The ether produces its effect upon the nerves as well as through the cerebellum. There are, therefore, biological differences between the two groups of muscles. Ether paralyzes first the voluntary and secondly the involuntary muscles. The crico-arytenoidæus muscle is automatic.

## ETIOLOGICAL TREATMENT OF SUPPURATIVE TONSILLITIS.

Dr. Clarence C. Rice (Jour. Resp. Organs, Dec. 1890) presented following summary:

1. The tonsils, like other lymphoid tissue, are blood-elaborating glands.
2. When acting normally, they also have power to prevent entrance of pathological organisms through the crypts by reason of large quantities of leucocytes contained.
3. When proliferation of interstitial elements results from inflammatory action, the germ-destroying power is lost; the lacunæ are occluded and present open viaducts through which bacteria pass to lymphatics.
4. All varieties of tonsillar inflammations are due to septic causes, specific germs, and those causing follicular disease, parenchymatous disease and peri-tonsillar abscess differ from one another.
5. Septic influences are exciting cause of tonsillitis, and pathological tonsils, being unable to perform physiological functions, are the predisposing cause.
6. There are three classes of tonsillar inflammation: follicular and parenchymatous tonsillitis, and peri-tonsillar abscess.
7. The term suppurative tonsillitis is incorrect, because suppuration occurs in surrounding connective tissue and very rarely in the tonsils themselves.
8. In persons having disposition to suppuration about tonsils, the tonsils are adherent to and covered by pharyngeal pillars.
9. Rheumatic predisposition or other diathesis is of secondary importance.
10. If tonsil is contracted by cocaine, pus can be found in anterior or posterior pillars early in the course of the disease.
11. Tonsils showing tendency to inflame frequently, causing peri-tonsillar suppuration should be destroyed by galvano-cautery or other operative measures.

## GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

### LACERATION OF THE CERVIX UTERI.

Skene Keith (in Lond. Med. Press., Archives of Gynæcol., Dec., 1890). After stating the opinion held by some that a tear of the uterus is of no importance, and admitting the fact that it may not always be necessary to suture the parts, he quotes Dr. Matthews Duncan, to the effect, that a chronic cervical catarrh extending over several weeks, in which proper treatment has been instituted, further treatment will not avail. To continue treatment you do your patient no good, and prolonged irritation may end in cancer. In some women a split cervix is of no more importance than a slightly torn perinæum, and does no harm. It heals over and is never known unless discovered accidentally. To other women a small tear is a source of discomfort varying from a slight leucorrhœal discharge to a general breaking down of the health. The symptoms are of a two-fold nature, and are owing either to the actual raw and eroded surface or to more remote results due to the irritation set up by this unhealthy or eroded surface. In considering the remote effects, this difficulty presents itself, that it is needful to discriminate between the conditions set up by the tear and those which have resulted from the same cause which gave rise to it, as for example, laceration of the perinæum and relaxation of the whole supporting structures of the pelvis. The womb is heavy and its tissues harder than usual. There may be headache and pain in front of pubes or pressure on the bladder, or feeling of general discomfort and weight in the pelvis and difficulty in walking. When the irritation is spread beyond the uterus and reaches the fallopian tubes, there will be pain in the groins.

He expresses the belief that laceration of the cervix may have to do with salpingitis, and he instances one case in which a repair of the cervix cured a well-marked case. In this case the tubes could be distinguished, as the patient was very thin and the diagnosis was confirmed by eminent authority, by whose advice the cervix was operated upon. The alternative rested between this procedure and the removal of the uterine appendages. Five weeks subsequent to the operation, no tube could be felt.

He therefore concludes that laceration with erosion may have been productive of tubal disease which had been overlooked.

It is not to be expected that the performance of Emmet's operation will cure every case of pelvic disease, for the irritation set up by the laceration may be but one factor in the condition.

To sew up a tear and yet ignore an existing retroversion would be irrational, whereas the cure of a laceration which had been the exciting cause of displacement by increasing the weight of the uterus would restore the balance between its normal weight and the natural supporting power of the structures which maintain it in proper position. The cases, therefore, where he advises the operation are those in which the patient complains of symptoms apparently referable to the injured cervix and where several applications of iodine and carbolic acid do no good, or where the improvement is only transitory.

If the operation becomes necessary the time thus employed will not have been lost, as the parts will be in a better condition for operation.

He condemns the drawing down of the uterus in repairing the cervix as unnecessary, and not entirely devoid of risk, as it may result in setting up serious inflammation in the adjacent cellular structures; for with practice it is easy to operate with the cervix in its natural position, and one can see with greater accuracy how much tissue needs to be removed and how much paring done.

In conclusion, he lays special stress on this point, that it is the severity of the symptoms, and not the extent of the laceration, which is to be considered, when advising for or against Emmet's operation.

(The suggestion of author as to the avoidance of traction in operation is important. I have had a cure of salpingitis follow repair of cervix.—W. B. C.)

#### LACERATION OF THE CERVIX.

Dr. Noble (*Annals of Gynæcology and Pæd.*, Jan., 1891). The writer is in accord with those who consider this lesion of importance in the causation of pelvic disease, though he holds that many heal spontaneously. He refers to a class of cases in which healing does not take place—the cervix gapes—involution does not succeed, and pelvic congestion, catarrh and menorrhagia follows, in which the general health suffers and various reflexes are developed. Local treatment may effect a practical cure, but often it is ineffectual. It is frequently complicated with displacements which cannot be corrected until the cervix is restored.

He favors curing complicatory endometritis before operation, and if hemorrhage is a feature of the case, advises curetting. He considers it contra-indicated in inflammatory conditions of the appendages, and in the neglect of this the chief danger is found.

He traces the relation between laceration as a cause of subinvolution, endometritis and salpingitis following by extension, and in the same connection refers to laceration of the cervix as a factor in the produc-



tion of cancer. He believes trachelorrhaphy done under conditions laid down as safe and valuable, and that the present tendency to decry its usefulness arises from a failure to observe the proper indications or to carry out the principles laid down by Dr. Emmet.

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## DISEASES OF THE SKIN.

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BY SAMUEL SHERWELL, M. D.,

Clinical Professor of Dermatology, Long Island College Hospital; Attending Physician, Brooklyn Hospital; Surgeon to Skin and Throat Department, Brooklyn Eye and Ear Hospital.

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### KOCH'S TREATMENT AS APPLICABLE TO DISEASES OF SKIN, ETC.

It would appear, even from German journals, that there is considerable diversity of opinion among dermatologists of those countries as to the merits of the lymph—for instance, in one of the latest receipts, *The Monatsheft. für Pract. Dermatologie*, Dec. 15, 1890—letters are given first from the clinic of Schweningen and Buzzi, of Berlin; the second emanating from Kaposi's clinic in Vienna. Whereas the first is fulsomely eulogistic of Koch and the method, as applied to all skin diseases, etc., having, or being supposed to have, a tubercular origin, the second denies that it leads to any rational conclusions as to diagnosis even; it reacting alike, as is claimed, in almost all neoplastic processes, such as *Lupus Erythematosus*, Syphilis, Epithelioma, and other cancerous processes, Sarcomas, etc., etc., and being effective as regards a cure in none of them.

In a more limited degree we find this relatively unfavorable opinion, held by many if not most of the dermatologues connected with the New York Dermatological Society. The same effects that have been alluded to in the Viennese letter as occurring in other neoplasms has been noted; and it has been stated that one case of Rodent Ulcer treated at one institution would seem to have benefited more than the cases of *Lupus Vulgaris*.

It has been denied by German dermatologists almost unanimously that *Lupus Erythematosus* had any etiological resemblance to *Lupus Vulgaris*, in that the former is and was a simple inflammatory neoplastic exudative disease, not caused, as is believed to be the case in *Lupus Vulgaris*, by tubercular processes; the fact of its equal reactionary stimulation, on the treatment by the so-called lymph, is made a great point of by the Viennese school.

Some of the later writings by French authors on the same subject show similar skepticism, as for instance:

Dr. Georges Thibierge, of the St. Louis Hospital, Paris, who had spent considerable time in Berlin under the most favorable auspices and conditions, declares in his contribution entitled "La traitement de Lupus Vulgaris par les injections du lymph du Koch," *Annales de Dermatologie et Syphilographie*, vol. i., No. 12, p. 941, that while acknowledging the probable great diagnostic importance of Koch's method, yet further on, being literally translated, distinctly says "there was not a single case in those he saw treated for this complaint, in Berlin, that had been even apparently cured.

*Per contra*, W. Watson Cheyne, of King's Coll. Hospital, London, reports "A Case of Lupus treated by Koch's Method (the *British Med. Journal*, Jan. 3, 1891, p. 21), giving as well three sufficiently good chromo-lithographs of the patient's state: 1st, of that before treatment; 2d, that of primary reaction, 0.006 gramme having been used fourteen hours before; 3d, that at the end of third week after continuous treatment. The patient had had eleven injections in all up to the time of last picture, and the injections had been gradually increased up to 0.02 grammes.

It would certainly appear to have been a typical case, and favorable showing of therapeutic effect. The chromo-lithographs, while not perfect, are not badly executed.

In the same number of the *British Med. Journal*, p. 26, is an interesting letter from Alex. Robertson, M.D., Royal Infirmary, Glasgow, giving his hypothesis as to mode, or cause, of action of the lymph. He compares it to that of the action of the acute exanthemata upon diseases of the skin: It has for some time occurred to your reviewer that its action was similar to that of the virus of erysipelas in its well-known inhibitory, and even curative effect, on lupus—a thing which has frequently been noted, and an instance of which has recently occurred in his practice. (It may be as well to state that the preceding was written before Koch made known (?) to the world his mode of preparation of the lymph. We are still prepared to believe that its action is analogous to that.)

S. S.

#### DERMOGRAPHY OR AUTOGRAPHISME.

M. Fereol, at a meeting of the *Société Medicale des Hôpitaux de Paris*, Nov. 21, 1490, gives a history of a case of this form of malingering in the person of a man *æt.* 30. This fellow had succeeded many times in being received into hospitals for various feigned eruptions. For instance, he had at one time simulated measles very closely by scratching himself with the teeth of a fork; at another time simulated a scarlatinoid eruption by rubbing himself with a coarse brush, and on still another occasion had caused an eruption sufficiently like variola to be mistaken for one stage of such, by pressure of a penholder on the cuta-

neous surface, before application for admission. It is interesting to note this, in view of some cases of same sort which crop up in twos or threes now and then, and are calculated to deceive the very elect; e.g., two of such cases of autographisme have been lately shown, or have been seen by various members of the N. Y. Derm. Soc., but as both were relatively easily diagnosed as such, the patients did not receive either the expected sympathy or attention.

Brocq., the latest French author on diseases of the skin (see Jan. No. of Brooklyn Med. Journal) gives the following prescriptions as those he employs in acne. They are generally good:

R. Hydrarg. perchloridi.....	1 part
Alcohol .....	50-100 parts
Rose water.....	150-200 parts

at first with equal parts of hot water, gradually lessen the quantity of water, and after a time full strength.

R. Hydrarg. perchlor.....	1 part
Tinct. Benzoin .....	8 parts
Emuls. Amygdal. Amar.....	480 parts

Mix and shake before using.

Also the following modification:

R. Hydrarg. Bichlor.....	1 part
Ammon. Chloridi.....	$\frac{2}{5}$ part
Spts. Dest. 90 per cent.....	100 parts
Aq. Dest.....	400 parts

The following is a paste he much favors:

R. Naphthol B.....	1 part
Sulphur precip.....	5 parts
Zinci oxidi.....	2 parts
Lanolin.....	5 parts
Ol. Amygdal. Dulc.....	7 parts
Ext. Violets.....	q. s.

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MEDICAL JURISPRUDENCE.

BY SIDNEY V. LOWELL.

The recent case of the People of the State of Missouri against Joseph A. Howell is one full of horror. Mrs. Minnie Hall, a widow, lived with four small children on a lonely farm, five miles from the so-called city of Brookfield, in Linn County, Missouri. Joseph A. Howell, the defendant, was a first cousin of Mrs. Hall, about twenty-four years old. He had left Ohio, where he was raised, and had been for some time working about on the neighboring farms until he commenced teaching school, some four or five miles away from Mrs. Hall's.

One cold winter night, at half-past ten, the farm-house where Mrs. Hall and her children lived was discovered to be in flames. Every effort was made to bring out the mother and her children, but without

avail; their bodies were consumed by the fire beyond recognition, but not before the bodies of the widow and one child had been recognized in the efforts to get them out, whether alive or dead.

Howell had been there that afternoon, it was known. It was not then known, but afterward suspected, that he returned in the evening.

Four young men followed the track of a man leading from the burnt dwelling. They followed its course, leading them through enclosures, brush timber and prairie, without regard to roads, to the environs of Brookfield. Here the man, who proved to be the defendant, was tracked by ingenious means to a sleeping-room in a hotel. In his clothes was a freshly used pistol.

The examination made of the bodies of Mrs. Hall and of the only child whose body could be identified showed that they had both been assaulted with a hatchet and also shot. Buried in the cellar under the burnt house, the day after the fire, was also discovered what proved to be, on the examination of the doctors present, a human fœtus about six or seven months old. The doctors were all clearly of opinion, from its perfect condition, that there had been an abortion produced. They were equally confident that the fœtus had been separated from the body of the mother and buried in the cellar before the house was burned.

Four doctors were examined as to the shortest period in which an abortion could ordinarily be produced. All but one agreed that if medicine were used, six to eight hours was the shortest time. The other physician, whose testimony was much insisted on, thought it could be done in one or two hours.

The theory of the prosecution was that the defendant, after leaving in the afternoon, had gone to Brookfield and procured means to make the abortion, had returned to the widow's and brought it about during the evening; that her death resulted from the operation; that the children—the oldest of the little innocents was only ten years of age—had seen or heard more than was safe for him; that he had then killed them all with the hatchet and pistol, also inflicting similar wounds upon the dead or dying mother; that he then set fire to the house and fled along the devious track by which he was followed through the tell-tale snow.

The defendant contended that the theory of the prosecution was right except that the evidence did not point to him, he claiming that there was not time enough in which he could have produced the abortion, as even if he had returned he could have been but two or three hours in the house; that it must have consumed more time; that it was done by some person who came there after he left—he having left there before six and gone to a place five miles away. The medical testimony on the question of the time required became very important. Illicit connection was proved to have taken place between the defend-

ant and the deceased and a desire on his part to have an abortion performed.

The jury brought in a verdict of guilty. On appeal, however, the judgment was set aside and a new trial ordered on technical grounds as to the judge's charge. It would seem as if the defendant was guilty, and that it was unfortunate that all this chamber of horrors had to be thrown open again or the defendant escape. Still it would be more unfortunate to convict a man innocent of the crime, even if his hands were not clean as to the deceased. I cannot find that the case has been again brought to trial. Yet here were five human beings undoubtedly murdered. There is a great deal of unavenged blood. A review of the cases in this city would be instructive. In a rural community there are, however, some long-deferred punishments.

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## MISCELLANEOUS.

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### MEDICINE TO-DAY.

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EXTRACT FROM AN ADDRESS OF DR. W. L. ESTES, SOUTH BETHLEHEM, PA.

The original method of Lister, occlusion by means of impermeable dressings impregnated with carbolic acid and antiseptic carbolic spray and washings, has been much modified. The Germans brought the filtering dressing into vogue and popularized corrosive sublimate as an antiseptic; acetate of aluminum, chloride of zinc, thymol, subnitrate of bismuth in suspension in water, iodoform, iodol, and lastly creolin, have each had its advocate and been variously used. The later researches in bacteriology have, however, done away with many of the disagreeable and cumbersome antiseptic appliances, and now the *aseptic* method is superseding the *antiseptic*. Without the example of Tait, Keith and a few other bold progressive pioneers, surgeons generally would have been much slower in adopting true asepticism as contradistinguished from antisepticism. The former method means thorough surgical cleanliness, that is, sterilization of everything about the part to be operated upon and everything which will come in contact with the wound. (Heat is now vying with carbolic acid and corrosive sublimate as an aseptic agent where practicable.) The idea is, if infection of the wound be prevented at the time of the operation, phagocytes will take care of the ordinary bacteria which are introduced from the air. This last method is the very quintessence of the antiseptic idea, but obtained in a much simpler and more physiological manner. Absolutely sterilized hands, instruments, part to be operated upon, and dressings, are the great desiderata. If this condition can be obtained, and continued by distilled water, by boiling or heating in an

oven, all the better; but if it can more conveniently be obtained by a chemically prepared germicide in such a way as not to be harmful to the patient, this is also good.

The correctness of the aseptic method is so thoroughly known that it needs no amplification. Mortality of major amputations, reduced from 45 per cent. to a little below 5 per cent., of exsections from 35 per cent. to below 2 per cent., laparotomies, which, though seldom practised for anything than ovarian tumors or wounds, had a mortality of about 50 per cent., now are less than 10 per cent., indicate how many lives have been saved.

McEwen's operation on deformed long bones, operations of club-foot by the open method, Mikulicz's amputation of the foot, Gritti's amputation of lower third of the thigh, are now almost certainly successful operations. The long list of laparotomies for various causes, among which Billroth's exsection of the pyloric end of the stomach, Loretto's digital divulsion of pyloric strictures, Freund's, Porro's and Hegar's removal of the uterus, and the late and brilliant successes of the Cæsarean section under the improvement and stimulus of the Säger method, are conspicuous examples. The removal of the natural glands for diseased conditions, as for instance, thyrotomy, splenectomy, nephrectomy; the invasion of the cranial cavity, the especial "*noli me tangere*" of surgery, and not only removing thence foreign bodies, such as bullets and impacted bone, but also tumors, cutting through parts of the *cortex* to do this too, and even removing circumscribed areas of the brain, with certain definite intent—these are all made possible and practicable by the aseptic method. The triumphs of cerebral and intracranial surgery, among the latest products of asepticism, are among the most important. It is not quite half a dozen years ago since McEwen published his success in removing cerebral neoplasms, and demonstrated the possibility of removing large areas of the cranial bones without permanent injury to the patient, while it gave marked facility in exploring the intracranium. Horseley soon followed and outstripped his predecessor and is now recognized as the great apostle of cerebral surgery. In this country Weir's and Keen's work in this direction are best known and perhaps most extensive, and altogether they show many most brilliant results. Now given a case of injury, or disease, with sufficient vitality left for the continuation of the unimpaired cerebral functions, the physiologist or neurologist localizes the affected area, the surgeon is called in, and an operation is unhesitatingly undertaken, and, thanks to asepsis, and the methods made possible by it, with a large ratio of success, where formerly the case was given over to certain death. The replantation of the fragments of bone removed by the gouge and trephine during the operation is now known to be an almost assured success, and is almost invariably practised.

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#### KINGS COUNTY MEDICAL ASSOCIATION.

The thirty-sixth regular meeting of this Association will be held at Wurzler's Building, 315 Washington Street, March 10th, at 8.30 P. M. Dr. E. J. C. Minard will read a paper entitled "The Tenth International Medical Congress at Berlin, as I Saw It."





IOANNES, FERNELIVS, DOCTOR, MEDICVS.

*N. Larmeslin sculp.*

JOHN FERNEL.

"The Hippocrates of his time" was in the sixteenth century the most eminent of French physicians. He was born in Picardy in 1506, or, as some say, in 1497, and was early noted for his intense application to his studies. We are told that even as a youth all other pleasures were to him insipid. He cared neither for play nor for entertainment nor for conversation. He gave lectures on philosophical subjects, which were as eloquent as those of the other masters of the time were barbaric.

After taking his degree in physic, he confined himself even more closely to his closet, being accustomed to rise at four o'clock in the morning and studying till it was time to lecture or visit his patients. He then examined the urine that was brought to him, for this was the method of those times with regard to the poor people who did not send for the physician. Coming home to dine, he shut himself up among his books till they called him to supper, returning to them the moment he had supped, and did not leave them till eleven o'clock, when he went to bed.

For many years he resisted the most importunate invitations of Henry II. and Catherine de Medicis that he would come to the court and become their physician, even feigning illness, for the reason that he feared that the bustle and activity of court life would interfere with his favorite studies, though at last he yielded and became physician to the court, where he found that, contrary to his fears, he had more leisure to devote to his favorite occupation, had not his wife sickened and died with affliction on leaving her relatives, which so grieved the great physician that he died within a month after she was buried, in 1558.

He was the author of many works, and, among other things, was the first to describe the disease gonorrhœa. He treated syphilis with mercury, and recommended mercurial fumigations.

His "De Abditis Rerum Causis," libri duo, Paris, 1548, underwent about thirty subsequent editions; and his "Medicina, ad Henricum II. and C." 1554, has been still more frequently reprinted, with various changes in the title.

He accumulated a vast estate by his business, which Plautius, his disciple and biographer, tells us amounted to from ten to twelve thousand livres a year.

He is considered one of the great restorers of medicine, and the first after Galen who wrote ably on the nature and cause of disease.



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*ORIGINAL ARTICLES.*

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GALVANIC AND FARADIC ELECTRICITY, AND THEIR  
USES IN GYNÆCOLOGY.

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BY LOUIS F. CRIADO, M.D.

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Read at the Annual Meeting of the Kings County Medical Association, Jan. 13, 1891.

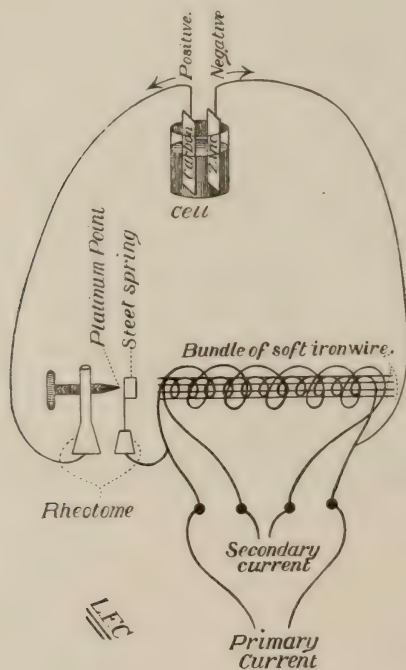
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The art and science of electro-therapeutics appear, generally speaking, to have heretofore led the medical profession to rely in their practice upon definite and familiar plans, and to have discouraged an attempt at the possible and probable benefits of an agent which in other departments has distinguished men as eminent, and withal wilfully overlooked and neglected by most of us. This fact is most probably due to the heretofore conflicting literature upon the subject, and more so, possibly, to the complete disregard of its fundamental principles in the "curriculum" for the degree of "M.D." It is to be hoped that we may in the future venture intelligently into the more certain and scientific study of electro-therapeutics, with the expectation that we may be led to recognize its value for the relief and cure of disease.

The knowledge of the various effects and results accomplished by electricity is not as certain as we might be led to believe; many astonishing statements are often made, and not with the least object of deception, but because human nature is very prone to deviate from facts and resort to an exalted imagination. We are often confronted with the efficiency and curative power of certain drugs, and more par-

ticularly and reasonably with that of electricity; and thus it is that the conservative reader should become somewhat of a skeptic, and refrain from the bewilderment of everything and anything.

The honor of having first employed electricity for and in hope of curing organic diseases is due to Cutter, who in the year 1871 reported the result attained in one case and many more in the years following; but for the most elaborate and scientific studies we are indebted to Apostoli, whose method, with but trivial modifications, is at present recognized universally.



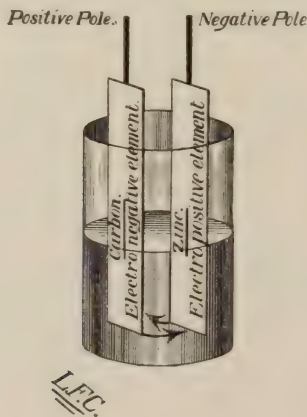
### FARADIC ELECTRICITY

The use of galvanism, equally as well as of any other kind of electricity, is possible in the hands of the general practitioner, if he be possessed with the necessary apparatus; but he should be sufficiently versed with the knowledge of electro-therapeutics in order to attain the best results. It is, therefore, indispensable that the operator should understand the difference between the *galvanic* and *faradic* currents; that the first named is a constant, uninterrupted current, most generally obtained by immersing a zinc and a carbon element into a cell con-

taining a solution of bichromate of potash and sulphuric acid. That from such a cell, or an indefinite number of such cells connected with one another, we secure an uninterrupted, galvanic current; and that an interrupted, induced, or faradic current is obtained by transmitting a galvanic current through an induction coil, the best and most powerful being those constructed by Ruhmkorff, in Paris. The mechanism of an induction coil and the manner in which the faradic current is produced are as follows: A galvanic current, secured from one or more cells, is permitted to pass through an insulated coil of wire, known as the primary coil, which in turn is encircled by another coil of insulated wire much finer, and therefore longer than that of the primary coil, but in no way connected with it, and known as the secondary coil. Within the primary coil is placed a bar or bundle of soft iron wire, which becomes magnetized when the current is passing, and at one end of it is placed a device known as the rheotome, vibrator, or interrupter. The rheotome consists of a fixed platinum point, and a steel spring interposed between the platinum point and the extremity of the iron core. The terminals of the wire forming the primary coil are disposed of as follows: One is connected to the negative pole of the battery, and the other to the binding post holding the steel spring, as previously described, interposed between the platinum point and the iron core. The positive pole of the battery is connected to the binding post of the platinum point. The galvanic current when passing through the primary coil causes an induced current in an opposite direction in the secondary coil, and at the same time magnetizes the iron core, which in turn attracts the steel spring of the rheotome, and at the moment it touches the end of the magnetized iron core demagnetizes it, thus permitting the steel spring to resume its original position and again to be attracted by the iron core. The movements of the steel spring toward the magnetized iron core sever the connection between it and the platinum point, and thus the circuit is broken. The current in the secondary coil goes in an opposite direction to that of the primary coil at first, that is, at the make of the current, but it follows the same direction as that of the primary coil at the break. The primary coil yields a current of large quantity and of small tension, but it has considerable chemical action. The secondary coil possesses the maximum power in producing muscular contractions, but is deficient in chemical power as compared to the former.

It is essential that the operator should thoroughly understand the construction of the apparatus he is about to use equally as well as the different results attained in the application of the *positive* and *negative* poles. In the most simple galvanic cell we are confronted with an *electro-positive element* and an *electro-negative element*, the combination of

which two elements, when partly immersed in an exciting fluid and connected at the free extremities, yields a current which is *uninterrupted*, and *therefore galvanic*. In order to become better acquainted with the galvanic current, let us for a moment notice the result attained by partly immersing a plate of zinc and another of carbon into an exciting fluid composed of water, bichromate of potash, and sulphuric acid. The zinc, in this case, becomes the electro-positive element; the carbon, the electro-negative element; for the reason that the zinc is the element most readily acted upon by the exciting fluid, and therefore becomes the positive or generating element. The carbon, being the element least acted upon, becomes the electro-negative element, therefore the negative or collecting element. We furthermore observe

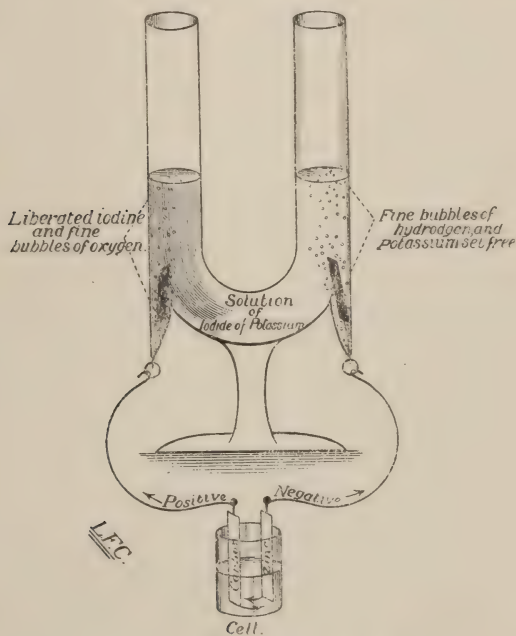


THE OPPOSITE ELECTRICAL CONDITIONS OF  
THE TWO PLATES DISCHARGE THEMSELVES

that the zinc becomes charged and at the same time yields a negative current of electricity, whereas from the carbon we secure the positive current; in other words, the opposite electrical conditions of the two plates discharge themselves. It is not only desirable, but important not to mistake the *positive element* with the *positive pole*, or the *negative element* with the *negative pole*. The *positive pole* is that connected with the *electro-negative element*, the carbon; the *negative pole*, that connected with the *electro-positive element*, the zinc.

It is quite important that the differential action of the poles should be understood, inasmuch as their chemical and electrolytic effects differ greatly. If the extremities of the two wires connected with the

elements of a galvanic battery be immersed in a vessel containing a watery solution of iodide of potassium, the electrolytic effect at the poles would be manifested as follows: The chemical becomes decomposed, the solution being discolored with *liberated iodine* at the *positive pole*; at the *negative*, the *potassium* set free and fine bubbles of *hydrogen* noticed rising. In like manner water can be decomposed, *oxygen* being set free at the *positive pole* and *hydrogen* at the *negative*, the experiment yielding at once the qualitative and quantitative analysis of water. If the terminals of the wire conductors be immersed into an albuminous solution, on examination we would discover at the *positive pole* a mass



DIFFERENTIAL ACTION OF THE POLES

of coagulated *fibrine*, *hydrogen* being liberated at the *negative pole*. If steel needles attached to the conductors be introduced into the skin, and a galvanic current permitted to pass, on withdrawal of the needles we will notice that the one connected with the *positive pole* is discolored, likewise the skin at the place of withdrawal of the needle, due to *oxidation*. The serum of the blood contained in the tissues also undergoes decomposition; *oxygen* is liberated at the *positive pole*, and *hydrogen* at the *negative*. Likewise the salts present are decomposed, the *acids* going to the *positive pole*, the *alkalies* to the *negative*; and thus it

is that in their nascent state they exercise a decided escharotic or chemical action upon the tissues, producing at times severe slough. It becomes, therefore, apparent that in all administrations of the galvanic current, and more particularly in gynæcological cases, we should carefully consider *which pole* to employ. There are, of course, operations that require, or at least in which we must use, both poles, as in fibroid tumors, our expectation and aim being in these cases to disintegrate the morbid growth; but it certainly would prove unwise, and indeed dangerous, if we should attempt to use the negative pole in a case of menorrhagia or metrorrhagia.

The galvanic current has a distinct polar and inter-polar action; the former is evident at the point of contact of each pole with the animal tissue; the latter, in the animal tissue comprised within the distance of the two poles. The polar action of the galvanic current is quite distinct. The *negative pole* when in contact with the skin will cause a *transparent, bluish vesicle*, which eventually terminates in a blister of greater or lesser dimensions, the fluid therein contained always proving *alkaline*. The *positive pole* under the same conditions will at first produce a depression, which eventually terminates in a *brownish, non-transparent blister*, but which, however, is not as prominent as the former, and the fluid therein contained is always *acid*. The inter-polar action of the galvanic current is mostly dependent on the theoretical principles deduced from its beneficial and curative administration; however, this much we know, that the nutrition of the parts is changed, equally as well as the fluids and salts held in solution.

The physiological effects of the galvanic current, as at first noticed by Galvani and later on by his nephew Aldini, consist of shocks and severe muscular contractions in the living as well as in the dead. Flashes of light are produced when the galvanic current is applied to the head, sounds when to the ear, and taste when applied to the tongue. The thermal effects can readily be appreciated by permitting a current to pass through a metallic wire, if not too long or thick; it at first becomes heated, then incandescent, and if the current be sufficiently powerful, it will cause it to melt. The luminous effects can be demonstrated at the point of contact of the terminals by closing and opening the circuit.

With the *faradic current* we are also capable of producing chemical changes, but the nascent chemical products constantly recombine, for the reason that the polarity is continuously changing; whereas the polarity of the *galvanic current* is constant, and therefore persistent in its action, unless, of course, the polarity is changed from positive to negative in harmony with the will of the operator.

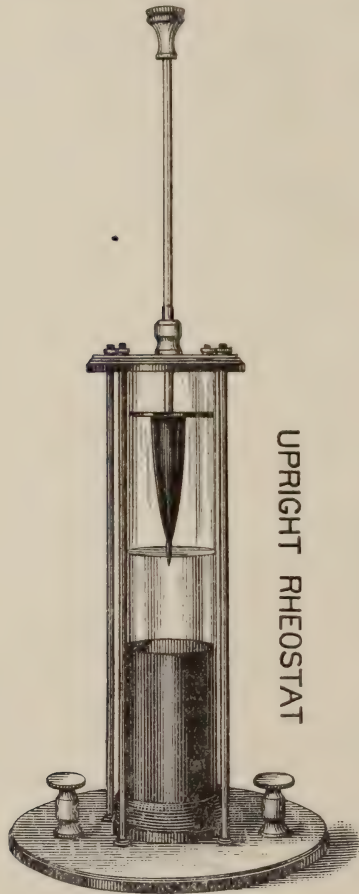
The galvanic, as well as the faradic current, is valuable and capable of producing chemical decomposition; but the galvanic current is much more powerful. The galvanic current has the advantage of overcoming resistance much more readily in producing muscular contractions in such cases as in which we *cannot* with the faradic, and it is much more powerful in its electrolytic action. Dr. Haynes states that when a muscle is deprived of its nerve influence, if its fibres be healthy, "the faradic will then produce no contraction of the muscle whatever, no matter how slowly the interruptions may be. The influence of the galvanic current is increased, so that weaker power is required to produce contractions than in the normal state." The faradic current can more readily produce muscular contractions on account of its interruptions; the mechanical effects are therefore much greater, and less care can be exercised in administering it than the galvanic. The *galvanic current* is generally indicated in such cases as in which we wish to produce *electrolysis, contraction of muscles that will not respond to the faradic current*, and on the spinal cord, brain, and sympathetic system when an electro tonic is desired. The *faradic* on the spinal cord, brain and sympathetic system, as a *mild stimulant to excite muscular contractions*, and for its *mechanical effects*. The facts relative to the different actions of the *galvanic current* may be described as follows: The *positive pole* is *sedative, coagulating*, and therefore *hemostatic, alterative, denutritive*, and causes a dry, hard scab, which eventuates into a *retracted scar*. The *negative pole* is *softening, stimulating, hyperæmic, hæmorrhagic, alterative, denutritive*, and causes a soft, *non-retractile scar*. Both poles (positive and negative) promote absorption; the *negative*, however, is the *most powerful*. The potential difference is greater in the faradic current; but the dynamic effect of the galvanic current is much more deep seated, for the reason that the faradic current is constantly reversing its polarity, whereas the galvanic has a more persistent polar action.

In acute mania and pregnancy, electricity in any form is contra-indicated according to the present knowledge of electro-therapeutics. Great care should be exercised in all applications of both kinds of currents to the head, and particularly not to cause a break in the circuit, nor use too strong a current, especially when using the galvanic.

The current furnished by stationary batteries, such as those of Leclanché, or almost any of its modifications, among which I much prefer the "Law Battery," arranged in a series, is the best, inasmuch as we can thus secure not only a strong current, but of the utmost constancy. For ordinary office and out-door work, a well constructed and reliable battery of not more than thirty cells, of the zinc and carbon elements, and an exciting fluid composed of bichromate of

potash, sulphuric acid and water will ordinarily fulfil all the requirements of the general practitioner.

It is advisable that the operator should also provide himself with a reliable milliampère-meter, in order to secure the most satisfactory and



ELECTRODE HANDLE RHEOSTAT



accurate work, for it otherwise becomes impossible to appreciate the amount of current administered. In reference to electrical measurements, the most concise information is as follows: The name *volt* indicates the *unit of electro-motive force*, whereas *ohm* indicates the *unit*



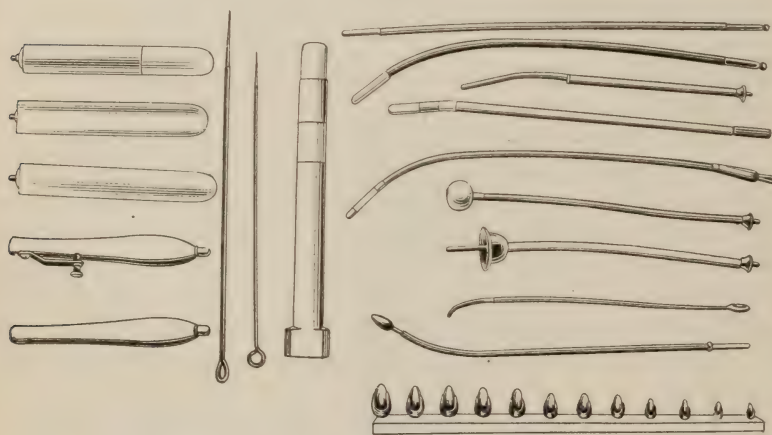
of resistance. An ampère is constituted by one volt, the unit of electromotive force acting through one ohm, the unit of resistance. The milliampère-meter is an instrument devised and used by electro-therapeutists whenever administering the galvanic current, inasmuch as they are thus enabled to ascertain the one-thousandth of an ampère, whence the name milliampère; in other words, it is an electric meter, capable of registering one-thousandth of an ampère. There are two kinds manufactured, the upright or perpendicular, and the horizontal. The upright I believe should be preferred, inasmuch as it can be placed in any position irrespective of the earth's magnetic influence, and because its register can more readily be observed.

The rheostat is another useful accessory, inasmuch as when interposed in the circuit it renders it possible for the operator to increase or diminish the current without causing a break or producing a shock, which would not only prove disagreeable to the patient, but most unsatisfactory to the operator.

I have recently examined and tested five of the best rheostats manufactured by well-known firms, and my appreciation as to their standard has proved thus as to have led me to design and have manufactured by the "Galvano Faradic Mfg. Co., of New York," two instruments, which I present to you for criticism. The first, the *upright rheostat*, is intended for use whenever accuracy is required from a fraction of a milliampère and upward. The other, the *electrode handle rheostat*, is designed for convenience, and is as accurate as the former, not however below one milliampère.

Among the many varieties of *electrodes* which have been devised, I will but mention the most useful and essential in gynæcology. Apostoli's clay electrode is made of a paste of medium consistency, of ordinary fine potter's clay, flat and quadrangular in shape, wrapped in gauze, with a metal plate attached to it. In like manner to the one just mentioned for external application, the flat sponge electrode, when thoroughly moistened with a solution of salt and water, will be found most serviceable, consisting as it does of a metal plate covered on one side by a flat piece of sponge, and on the other by a piece of waterproof texture. Intra-uterine electrodes are generally constructed on the principle of an ordinary uterine sound, with the exception that they are insulated to within about three inches of the extremity intended to be introduced within the uterine cavity. Recently Apostoli has recommended an intra-uterine electrode, made of plastic carbon, to be used in administering strong currents; but the metal or material used in the manufacture of electrodes whatever it be, *platinum* or *gold* is certainly to be preferred, *especially* if the electrode used be connected with the positive pole, for the reason that it is not acted upon by the

acids; in fact, it is a good rule, not to be forgotten, that *vaginal or uterine electrodes used in connection with the positive pole should never be otherwise than platinum*. The bi-polar intra-uterine electrode is thus constructed as to enable the administration of both poles; likewise the bi-polar vaginal electrode. The intra-uterine cup electrode is similar to the ordinary polar intra-uterine electrode, with the exception that it has a cup upon which the cervix should rest when the instrument is placed in position. Ball electrodes are made of a stiff or flexible stem, at one end of which a brass ball, the size of a marble, is attached. The needles used for puncturing are, or should always be, made of platinum, bayonet shaped, and properly insulated.



The value of electricity in gynæcology should be more widely appreciated. The popular and somewhat as yet lingering idea that the usefulness of electricity is to excite a muscle into contraction has probably tended to limit its application; but withal we know to-day that it not only acts as a stimulant and tonic, but as one of the most satisfactory and efficacious sedatives.

Many women, and even men, are fearful of all and any electrical treatment whatsoever, for the reason, probably, of their having undertaken administering to themselves this agent at their own suggestion, or even at that of their advising physician, or because they have learned of the experience that a friend of theirs had on a certain occasion. Whenever, therefore, electricity is to be administered for the first time, it is generally an advisable plan to begin by stating in a moderate manner, at the time that all is being placed in readiness, the sensations that will be experienced, and also to commence the treatment with a mild current, which should be gradually increased until approximately

indicated, unless the patient complains of pain more than once, in which case it should be diminished. It is advisable before undertaking any treatment to ascertain that the battery and all other adjuncts are in good order. In certain inflammatory and engorged conditions of the uterus, the simple introduction of an ordinary uterine sound will oftentimes provoke some bleeding; under the same conditions, intra-uterine electrical administrations will cause a sanguineous discharge, and even some slight uterine contractions—a fact with which we should acquaint the patient at a convenient time, or otherwise prepare philosophically for a surprise; the patient will desist in pursuing further treatment.

The use of electricity in gynæcology has recently attained much progress, and principally for the reason of the more frequent use of the single current internally, the other being applied externally to the abdomen, sacrum, lumbar region, or at once anteriorly and posteriorly, by a bifurcated conductor. It becomes, therefore, customary in speaking of the use of electrodes to refer only to the one to be applied internally, the external always being understood to be used as before mentioned.

In referring to the diseases of women amenable to electric treatment, I will mention the most important and in a very concise manner.

*Amenorrhœa.*—The administration of the galvanic or faradic current should not be disregarded in this disease unless considerable defects in development exist. Engelmann recommends very highly the faradic current whenever no serious defects in development exist, whereas the galvanic, if the condition be due to hyperplasia of the uterus. Rockwell prefers the faradic current in such cases as in which anæmia predominates, whereas in plethoric persons the galvanic. In reference to the galvanic current, he says: "In amenorrhœa, either pole when applied to the uterus may be followed by the best results; the positive is decidedly preferable in some cases, because its tendency is to more readily contract the involuntary muscular fibres." Blackwood uses the faradic current, and the galvanic and faradic alternately in defective involution. Parvin says: "The positive (galvanic) electrode passed into the uterine cavity, the negative applied to the hypogastrium, gives oftentimes a very prompt success in inducing a sanguineous discharge from the uterus." One single internal application may prove successful, but in most cases, whatever method be used, the continuance of the treatment should be advised in order to secure the most permanent relief. The positive or negative (galvanic) pole may be administered; generally the positive proves the most useful. An intra-uterine electrode should be placed in position, and a gradually increased

current of from 10 to 20 milliampères administered for five or ten minutes every two or three days.

*Dysmenorrhœa.*—Engelmann regards the galvanic current equally as valuable as the hypodermic administration of morphia in cases of dysmenorrhœa, and advises the use of negative intra-uterine electrode and the administration of a current, which should be gradually increased to 40 milliampères. Playfair has likewise attained excellent results, and mentions two cases otherwise treated without relief, but which were entirely cured by galvanism. He advocates the administration of the negative pole by means of an intra uterine electrode, and the strength of 100 milliampères, whereas Blackwood states having secured the best results with a galvanic current of from 75 to 150 milliampères. Rockwell says: "It is in so-called neuralgic dysmenorrhœa and that due to spasm of the os uteri that galvanism is more especially called for—when dysmenorrhœa is due to mechanical causes that are well defined, when the nerve filaments are pressed upon by exudations, when the canal is occluded by chronic inflammatory swellings, the negative pole is always to be used."

*Menorrhagia and metrorrhagia* can most successfully be treated by intra-uterine electrolysis, thus especially if the excessive flow be due to uterine fibroids or polypi, but a strong current is almost always requisite. An intra-uterine electrode connected with the positive pole is placed in position and a current administered, which should vary from 30 to 150 milliampères.

*Chronic metritis and endometritis.*—The administration of the galvanic current in these cases is regarded as most efficacious, and most excellent results can be attained in cases of endometritis. Grandin recommends its administration, and more especially in *subinvolution*. From 20 to 50 milliampères administered every second day will generally be sufficient, but it is advised in some cases to increase it to from 100 to 150 milliampères. The positive current administered within the uterus is indicated whenever there is no coexistence of stenosis of the cervical canal, in which case we should at first resort to the negative; but whenever the latter provokes hæmorrhage, the former (the positive) should be substituted. The intra-uterine electrode should be made to come in contact as much as possible with every part of the uterine cavity by moving it about from place to place.

*Stenosis of the cervical canal.*—The result attained by the administration of the galvanic current in stenosis of the cervical canal is most satisfactory. An olive-pointed electrode connected with the negative pole should be placed at the "os externum," and gradually pressed inwards. The strength of the current necessary varies from 10 to 50 milliampères; the treatment should be repeated every two or three

days, and advantage should be taken in the introduction of larger electrodes on every successive occasion. Fry states that in stenosis of the cervical canal, the only valuable method of treatment is galvanism, and that its immediate and remote effects are the best and most lasting.

*Ulcerations and erosions of the cervix* can readily be cured with the galvanic current. An intra-uterine cup electrode is placed in position in connection with the positive pole, and current permitted to act for a period of from five to ten minutes. The strength of the current should be limited to within from 20 to 100 milliampères, and the treatment repeated every three or five days.

*Ovarian neuralgia and obscure pelvic pains.*—In these affections the faradic current is much used, and the result is frequently surprising. On other occasions a moderate galvanic current is preferable. Apostoli recommends the use of the faradic by means of the bi-polar intra-uterine electrode and the galvanic, by introducing into the uterus an electrode connected with the negative pole. The strength of the current should be between 10 and 30 milliampères. In reference to the faradic current, Goelet says: "The fine wire faradization (the secondary coil) will be found most particularly useful in relieving obscure pelvic pain, usually of hysterical or neuralgic origin, which so often resists obstinately other methods of treatment." Engelmann praises the faradic current in ovarian neuralgia, whereas Grandin claims that the galvanic current is the most reliable; and the same view was held by our late citizen Freeman. Rockwell says: "In any given case of chronic ovarian pain it is impossible to speak positively in regard to measure of benefit to be obtained by the use of electricity. The only thing to do is to make an effort, and in a certain proportion of cases the results obtained will abundantly reward us for the labor expended. Nor is it always possible to decide beforehand what form of electricity or what method of application is especially indicated."

*Pelvic inflammatory exudations.*—In reference to this condition, Bartholow says: "A large and accumulating experience in this country and abroad has conclusively demonstrated the power of galvanism to bring about the absorption of inflammatory exudations in the pelvic cavity. Whether the result in pelvic diseases is affected by the action on the vessels or by catalytic or cataphoric influence may be a merely technical question, but the important practical fact is established that by galvanic, faradic and galvano-faradic applications very serious maladies are cured, and more speedily, safely and easily than by the best directed use of medicines." A cotton-covered vaginal electrode connected with the negative pole should be placed in position, and the strength of the galvanic current thus administered should be between

20 and 100 milliampères. At the beginning, if the parts be sensitive to pressure, from 20 to 30 milliampères will be sufficient, the application being renewed every other day; but as soon as ordinary pressure does not appear to cause pain, the current should be increased in order to secure the best results. Intra-uterine galvanic treatment can also be practiced with the same object, in which case an intra-uterine electrode should be substituted for the one before mentioned. Rockwell says: "The benefit indeed to be derived from this method of treatment in such conditions is only indifferently appreciated by gynecologists. For the absorption of old exudations in other parts of the body the galvanic current has long been known to be the most efficacious; but only within a comparatively recent period has it been tested in the thickening and infiltration resulting from inflammation of the pelvic cellular tissue." Apostoli has recently recommended galvanopuncture in the vicinity of the inflammation; but such procedure I believe should only be undertaken by the specialist.

*Hypertrophy of the cervix* can successfully be remedied with the galvanic current. Two or more needles connected with the negative pole of a galvanic battery should be thrust into the hypertrophied tissue, and a current of from 5 to 20 milliampères permitted to pass for a period of from five to ten minutes. The operation should be repeated every two weeks.

*Extra-uterine pregnancy.*—In reference to this most interesting subject, I beg to be permitted to quote from Rockwell as follows: "My experience in the treatment of extra-uterine pregnancy has been given elsewhere, hence it will be unnecessary to repeat in full detail here the various cases that serve to prove the feasibility of the operation as well as its great value. That the destruction of the foetal life could be easily affected by electricity admitted of no doubt, but whether it was possible to do this without in any way injuring the mother was a question that could be determined only by an experimental effort. This opportunity was afforded some years ago in a case in the practice of Dr. Charles McBurney, when the method was suggested by Dr. T. G. Thomas, and I was asked to superintend the operation. The case was one of tubo-interstitial pregnancy at the third month, and terminated favorably by the expulsion of the foetus and placenta through the uterus. Subsequently, eleven other cases fell under my observation, all of which I submitted to similar treatment, and with results entirely satisfactory. In these operations the galvanic current alone was used, the position of the poles varying according to the position of the foetal mass, and the strength of the current according to the susceptibility of the patient and the probable distention of the fallopian tube. In my own cases the current varied in strength from 10 to 20 milliampères.

In regard to the position of the poles, my custom has been to place the positive externally. This should consist of a broad, flat sponge pressed firmly on the skin and directly over that portion of the tube where the fœtus is developing. The negative pole is used internally, and may be carried up to the fœtal mass, either through the vagina or rectum, according to the position and size of the tumor. As there seems to be no way of determining positively whether the fœtal life is immediately destroyed by the first application, it has been customary to repeat it three or four times, and, as but little pain is caused, there can be no especial objection to its repetition on this score." Great care should be exercised in undertaking this operation, inasmuch as there is the possibility of rupturing the over-distended tube. The current should be, as in all other operations, gradually increased and likewise diminished.

*Uterine fibroids.*—In the treatment of uterine fibroids by electricity we must never expect a radical cure, but content ourselves with the diminution in the size of the tumor and the amelioration of such disturbances as pressure, pain, menorrhagia and metrorrhagia. Among English laparotomists the most enthusiastic advocates of this plan of treatment appear to be Spencer Wells and Thomas Keith. The latter says: "I never was in favor of hysterotomy, but to-day I feel strongly that I should think myself guilty of a criminal act if I should recommend to a patient to risk her life without having given a thorough trial to electric treatment." Cutter appears to have been the first to employ electricity in this disease; but among his followers might be mentioned Brown, Thomas, Martin, Cheron, Steavenson, Ombani, Engelmann, Freeman, Apostoli, and many more. The operation is as follows: The vagina should be thoroughly syringed with an antiseptic solution, and a large potter's clay electrode placed upon the abdomen, care being taken previously in protecting all pimples or abrasions by placing upon them small pieces of adhesive plaster, as it otherwise would become impossible for the patient to withstand even a moderately strong current. The operator should then rinse his hands in an antiseptic solution, and at once attempt the introduction of an intra-uterine electrode, which on certain occasions becomes difficult and even impossible on account of the position and pathological condition of the uterus. If the tumor is dense and of a fibrous nature, the negative pole should be connected with the internal electrode; when the tumor is more vascular and therefore softer, and menorrhagia co-exists, then the positive pole is indicated. When it becomes impossible to introduce the intra-uterine electrode, a puncture made through the os or through the vagina by a partly isolated platinum or gold needle, or by Apostoli's trocar, leading half an inch into the most prominent part of the tumor,

has been practiced ; but great care should be exercised in not piercing any large blood-vessel, the bladder, Douglas's cul-de-sac, or causing otherwise any injury not intended. The current should be gradually increased and likewise diminished, and care should be exercised in not causing a break, which might prove most severe and unpleasant. The strength of the current recommended for galvano-puncture varies between 50 and 100 milliampères ; in non-galvano-puncture, not more than from 60 to 100 milliampères can be withstood by the patient at first, but an increased strength of the current can gradually be tolerated on subsequent occasions, and thus 250 milliampères might be administered ; but under all and any circumstance the treatment should not be prolonged beyond five or ten minutes, nor undertaken oftener than every eight or ten days. After a short rest of one or two hours, patients are generally able to go about, and on the following day to attend to their usual vocation ; others will complain of tenderness and pain, and should be advised to remain in bed for a period of one or two days. In such cases as in which the tumor appeared sufficiently approximate to the abdominal walls, I have witnessed Dr. Freeman, late of this city, practice electro-puncture through the abdominal walls into the tumor without its giving rise to any unpleasant symptoms, and I can attest to the fact that on every subsequent treatment the tumor appeared considerably reduced in size. He also used a partly insulated curved needle connected with the positive pole, which he passed through the cervical canal or through the cervix and thrust into the tumor ; the negative current being connected with another needle which likewise was thrust into the tumor through the abdominal wall. When the tumor proved small, the needle attached to the negative pole was substituted by a large sponge electrode applied to the abdominal wall over the region of the tumor. Dr. Shoop informs me as follows : "Lately, in cases of small tumors, Dr. Freeman used the negative steel needle thrust into the tumor, and attached the positive pole to a large abdominal pad. The large tumors he treated as before, never using a steel needle attached to the positive pole, and never introducing a negative probe into the cavity of the uterus."

In conclusion, I will state that I believe that much relief and many cures can be attained by electricity, especially in such cases as in which other methods have proved a failure, if intelligently and more extensively used ; but that under no circumstances should this agent be administered or trifled with unless we become sufficiently versed in electrotherapeutics, inasmuch as lack of dexterity or insufficient knowledge might cause results contrary to our expectation, and our very object thus be frustrated.





## ANDREAS VESALIUS

### Bruxellenfis

*Invictissimi Caroli V. Imperatoris Medicus.*

ANDREAS VESALIUS.

"The Father of Anatomy" was born in Brussels in 1512 or 1514, descended from a long line of physicians. John Vesalius, his great-grandfather, was physician to Mary of Burgundy; Everard, his grandfather, wrote commentaries upon the works of Rhegis and Hippocrates; and his father, Andreas, was apothecary to the Emperor, Charles V.

There is probably no name of greater renown in the record of professional characters than his, and the passion for anatomical study which has made him so celebrated developed in his early youth; for we find him when a schoolboy amusing himself with the dissection of moles, dogs and cats, and with inspecting their viscera.

His principal teacher was James Sylvius, the great anatomist, whose name is attached to the fissure which is so deeply ploughed into our brains, but he also studied under John Fernell, and Guinther of Andernach.

Human anatomy at this period could scarcely be said to be cultivated as a science; the practice of dissection was regarded as unlawful and impious; the knowledge of the schools was looked upon as sacred, and no one dared to question the validity of the received doctrines of the ancients, and Charles V. had a consultation of divines at Salamanca to know whether in good conscience a human body might be dissected for the sake of comprehending its structure.

He perfected himself in this science very early, as we may know from his work "De Humani Corporis Fabrica," the sumptuous *opus magnum*, by far the most splendid work on anatomy the world had. I had almost said has) ever seen, which is said to have been composed when he was but eighteen years old.

We are lost in admiration of his youthful genius while contemplating the production of an entire work upon Anatomy of the Human Body derived from actual observation and dissection at a period when such investigations were held to be unlawful.

My friend George Jackson Fisher, of Sing Sing, tells us how "he induced Titian's favorite pupil and most faithful imitator, Johann Stephen von Calcar, to leave his studio and sit by his side in his dissecting-room and carefully delineate the parts as he demonstrated them; the famous press of Joannem Oporinum, of Basle, slowly but perfectly worked off the sumptuous folio sheets" of this monumental work, which we have not space to describe. The portrait at the head of this page is taken from the two-volume folio edition of 1725, the chief ornament of the writer's library. He was shipwrecked and perished with hunger upon the island of Banto, Oct. 15, 1564.



PELVIC ABSCESS, WITH THE REPORT OF A CASE OPENING  
SPONTANEOUSLY INTO THE BLADDER THAT WAS  
REACHED BY CYSTOTOMY AND TREATED BY  
VAGINAL DRAINAGE.

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BY A. H. BUCKMASTER, M.D.,

Assistant Surgeon Woman's Hospital State of New York.

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Read at the meeting of the Brooklyn Gynæcological Society, November 7, 1890.

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In considering the subject of pelvic abscess, the gynæcologist excludes those cases that arise from bone disease or from organs situated outside of the pelvis, because, as a rule, such cases can readily be classified and referred to the general surgeon. We are therefore restricted to abscesses taking their origin from the pelvic connective tissue or veins from the tube, ovary, uterus, rectum or pelvic glands. These abscesses have been noted from the earliest times, and many curious speculations in regard to their origin have been entertained. Ignoring the ancient theories of causation, such as sudden suppression of the milk, the present views on the subject may be stated as follows:

The abscess may arise from a septic lymphangitis by which morbid material is carried into the connective tissue by the lymphatics, and here finds a tissue presenting the conditions most favorable for suppuration. It occurs frequently after childbirth, where are not only found tears of the cervix, but of the vagina as well. Of seventeen cases of pelvic abscess noted by Emmet, only one case occurred in the unmarried. The sponge-tent has been a frequent source of septic infection, tearing the cervix and opening up the connective tissue and at the same time damming back the secretions. The modern plan of extreme rapid divulsion has also occasioned abscess.

It may arise from mechanical violence to the connective tissue about the uterus. As remarked by Skene, "contusions of the cellular tissue during difficult delivery or surgical treatment may also tend to inflammation in the same way as contused wounds of the subcutaneous tissue cause inflammation and abscess."

It may take its origin from the breaking down of a hæmatocele. This cause is not very uncommon, and the proof of its etiological importance is demonstrated by finding an abscess with a large blood-clot with a characteristic history of its sudden formation. It may also be noticed in ovarian cysts and other tumors.

Inflammatory action resulting in pus-exciting material may arise from the tubes, pelvic glands, pelvic veins, ovaries and walls of the rectum or bladder.

Sudden suppression of menstruation flow, by exposure during this time, is frequently given as a cause.

The diagnosis is usually made by the presence of pelvic pain, which is increased by locomotion. It has associated with it a tender pelvic mass and is accompanied by an elevation of temperature, and there may be chills or chilly sensations. Sometimes we find nausea and vomiting. For the purpose of clearness, pelvic abscess may be divided into two classes: those in which the inflammatory action is limited and those where it is diffuse. The first class includes a most troublesome class of patients. On examination is found a board-like mass with points, which perhaps may feel suspicious. The presence of a septic fever with perhaps chills indicates the formation of pus, and yet the puncture of the trocar or aspirating needle may prove disappointing and but add to the anxiety. These cases sometimes go on for years, and are usually occasioned by diseased tubes. The second class of cases are those of circumscribed suppuration. The diagnosis is usually not attended by difficulties. It occurs in the connective tissue, and is usually accompanied by frank symptoms of inflammation. The differential diagnosis is sometimes attended with difficulty. When a tumor has been detected, it has been confounded with ovarian and other tumors, and when an inflammatory mass was not noted, it has frequently been mistaken for irregular typhoid. I saw such a case with Dr. Landon Carter Gray. The patient was a young girl who complained of nausea and pain over the upper part of the abdomen. A slight elevation of temperature had been noticed, and there was no special tenderness on pressure over the lower abdomen. The attack had been tentatively set down as one of acute indigestion. She had had several of the same nature before. The temperature persisting, Dr. Delafield was called in, and went over the case carefully, but was unable to arrive at a positive diagnosis. On the day following the consultation Dame Nature made the diagnosis by evacuating a pelvic abscess into the rectum. Here was a case of acute inflammatory action accompanied by symptoms which pointed to organs remote from the primary seat of trouble. A pelvic abscess has been mistaken for a cystocele. It appeared in the position where this tumor is found, and a hypodermic needle used for diagnostic purposes passed through the abscess and into the bladder, misleading the medical attendant. The writer has seen a dermoid cyst mistaken for an abscess, and another case when an extra-uterine pregnancy was mistaken for an abscess. He also saw a case recently that appeared to be one of those rare

fibroid tumors arising from the broad ligament, but the pus evacuated itself through the rectum after being subjected to a strong galvanic current.

The prognosis depends on the origin of the trouble, the condition of the patient and the ability to secure and maintain drainage. Abscesses arising in the connective tissue are amenable to proper treatment and not apt to recur. When the source of the trouble is a diseased tube leaking into the peritoneal cavity, the cause remains and often gives rise to many attacks of abscess formation.

The treatment of pelvic abscesses is very simply stated: To evacuate the pus whenever good drainage can be maintained. This rule is a rule of general surgery, and is generally applicable, in chronic conditions as in the acute forms. When an abscess is within easy reach from the vagina, it should be opened by this channel. In this case the wall of the pus cavity is agglutinated to that of the vagina, and the opening can be made with any pointed or sharp-cutting instrument. One should feel carefully for the pulsation of any large vessel and avoid the ureter. The opening should be large enough to admit of digital exploration. The use of the aspirating needle to evacuate the abscess, and trust to its healing without drainage, has been advocated. After the pus is withdrawn, the sac is washed out through the needle, care being used not to send in as much fluid as the amount of pus originally in the sac, so as to avoid its rupture. This method of aspiration is not a satisfactory one, and the successful cases are in the minority. The conditions necessary for a successful issue are that the walls of the sac should fall together after its evacuating and that the broken-down material can be completely removed. It is sometimes advised to aspirate first, and if this is not sufficient, to freely open the abscess a few days later. The folly of such advice is made apparent by a little practical experience. The writer saw a case that was aspirated by a hypodermic needle, and the sac of a tense wall abscess torn so that pus leaked and set up a septic peritonitis. This is well illustrated by the narration of another case, also seen by the writer. Some years ago a well-known surgeon plunged a trocar and cannula into a large abscess which sagged down behind the uterus. The trocar was removed, and about a pint of pus flowed through the cannula. By some mishap the cannula was pushed out of the cavity, and the surgeon found it impossible to replace it. The tissues had retracted, some more than others, and the opening was practically obliterated. He made several unavailing efforts to force his way into the sac. The temperature fell to normal immediately after evacuation of the abscess, but in a couple of days soared up to  $103^{\circ}$  F., and gave us much anxiety until a sufficient quantity of pus again collected to enable us to make a second opening.

In this case if the operator had passed by the side of the cannula a pair of dressing-forceps and opened the points, a large opening could have been safely produced. Some surgeons use a pair of sharp-pointed scissors; these can be separated, and the opening thus made very large. Dr. Cushing, of Boston, has devised a pair of scissors with the backs sharpened for this purpose. The abscess should then be explored by the finger and secondary cavities cautiously emptied.

Having obtained a sufficiently large outlet for the pus, the next problem is to maintain it. Rubber tubing is sometimes used, but it is not efficient, for the reason that the elasticity of the tissues causes them to contract about the tube and compress it to such an extent that it no longer drains. The drainage-tube must be of an unyielding material, such as hard rubber or glass. Glass is easily made clean. The form in which it has been used was that of a long tube with a flange at the end. The objection to this form is that a short time after it is placed in position it is either crowded out of the cavity of the abscess or is

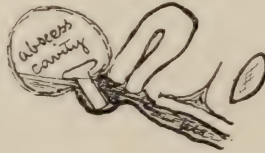
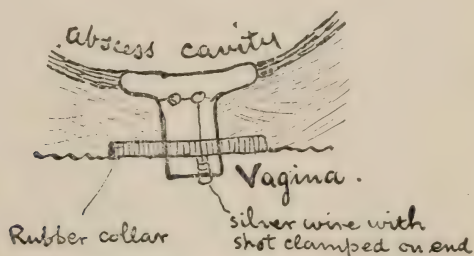


DIAGRAM NO. 1.

pushed far into it. In the latter case the condition shown in the diagram (No. 1) soon manifests itself. The wound closes about the tube, and a pocket of pus (shown by straight lines) remains that cannot escape. It may be small in quantity, but enough to poison the patient. To prevent this pocketing of pus, the tube may have lateral perforations, V-shaped slits, or it may be made immovable by stitching it into the wound. The perforations are apt to become clogged and the stitches soon become loose. To obviate this, the writer devised the following form of tube: It was assumed that an ideal tube would be one with flanges at each end fitting into the exit tract of the abscess, with one flange inside the abscess, the other in the vagina, like a stud-button in a shirt, with a canal through its main portion or stem. Such a tube has been devised by Dr. Emmet, but has not become generally used, because it would be necessary to accurately judge the thickness of the wall of the abscess through which the discharge escapes, or otherwise

there would be a pocketing of the pus. It would therefore be necessary to have a large number of tubes of different sizes, and not only would much time and trouble be required to fit one, but it would be difficult to remove the tube when it was no longer required. By making the tube in two parts, bound together by silver wire or waxed silk, this difficulty is overcome. An ordinary drainage-tube with a large flange is placed in the abscess cavity, so that the flange is drawn against the inner opening and prevents it from being pushed out. The end of the tube projects about three-quarters of an inch into the vagina. The second part is a collar of hard rubber, which slips over the end of the tube and is fastened to the main tube by heavy silver wire clamped by shot, as shown by the diagram (No. 2). It is placed in the tissue between



• DIAGRAM NO. 2.

the vagina and abscess like a rivet until it is necessary to remove it, when the wires are loosened and it will easily be rolled out. Before the tube is placed in position the raw tissue about the edges of the wound should be swabbed with fifty per cent. carbolic acid in glycerine. While I regard this drainage-tube as the one that is most satisfactory, the method devised by Dr. T. A. Emmet, of drawing the lining membrane of the cavity and stitching it to the vaginal membrane, as better, because no raw surface is left by this method for absorption, the only difficulty being that the opening is apt to become small, and when drainage is no longer required, another operation is necessary.

In some cases the abscess is not near the vagina, but is connected to it by a narrow fistulous tract. By using great care a probe may be introduced, followed by a divulsor, and drainage thus secured.

In cases where the abscess has ruptured into a hollow viscus, the treatment must be governed by circumstances. In case of the rectum, the lower portion of the bowel should be rendered accessible by stretching the sphincter while the patient is etherized, and then the opening sought by using a Sims speculum. If the opening can be found, a probe should be introduced into the abscess, and, after its cavity has

been carefully washed out, a free opening made through the vagina, or perhaps the abdominal wall, as may be most readily reached. In case the peritoneal cavity has become obliterated over the abscess, the puncture through the wall is attended with no danger. When the new opening has been made, the old one should, if possible, be closed by freshening its edges and suturing them together. Sometimes the abscess opens into the ureter. In this case it may be necessary to open the peritoneal cavity. The cases where the opening is high up in the rectum are always difficult ones to handle, and the treatment must be modified to meet varying conditions.

The third class of cases are those which cannot be reached directly from the vagina or which have no fistulous tract connecting them with the vagina. In those cases where septic symptoms arise and where they cannot be approached with certainty by the rectum or bladder, an explorative abdominal section is indicated. This section may indicate one of three courses of treatment. It is assumed, of course, that the peritoneal cavity has not become obliterated over the abscess:



DIAGRAM No. 3.

1st. It may be necessary to open the abscess from above and stitch the edges of the pus sac to the parietal peritonæum. The pus should be first carefully removed by an aspirator and the sac washed out with an antiseptic fluid before opening it.

2d. In case the edges of the sac cannot be approximated to the abdominal wall, a drain must be used, and in forty-eight hours adhesions forming about it will leave a fistulous canal leading from the abscess cavity through the abdominal wall.

3d. The abscess may be reached by going below the peritonæum and perhaps opened through the inguinal canal.

The conditions necessary for the maintaining of drainage are as follows:

The opening must be large enough to permit the escape of the secretions before they can decompose, and should permit digital exploration, so that secondary cavities may be evacuated.



The drainage-tube must be of an unyielding substance that will prevent the opening from closing up.

It must be fixed in the opening so that it will not drop out or be pushed in, the latter condition being worse than the former, as the surgeon is lulled into a sense of false security.

The cavity must be kept aseptic and as far as possible non-absorbent, by keeping the vagina clean and by going over the surface of the abscess cavity with some powerful antiseptic and by douches. The writer employs phenol and glycerine, equal parts, for an occasional application.

There must not be too much motion of the inflamed tissue. The psoas and iliacus muscles are in such close relation to any tissue at the sides or of any considerable size behind the uterus, that their contraction must affect it considerably. Mr. Henry Morris narrates a case which illustrates the value of immobilizing these muscles. It was a case of suppuration in the pelvis and left iliac fossa. He had made free incisions and drainage above Poupart's ligament. For several months a free purulent discharge persisted, and finally he immobilized the hip by a splint and allowed the woman to get up. There was a complete cure in six weeks.

As regards the comparative frequency of the different channels of exit for the pus, but little is to be said. Of five hundred references to pelvic abscess that were studied by the writer, the most frequent avenue was by the bowel, and next in frequency was the vagina. The case to be spoken of by the writer, that of rupture into the bladder, had a very infrequent termination. This occurrence is not considered favorable. Schroeder<sup>1</sup> says that when the abscess has broken into the gut or bladder, we have to deal with a grave condition, as it is difficult or impossible to reach the abscess from the vagina. Thomas quotes Nonat, saying "that when the collection opens spontaneously into the intestine and bladder, death is almost inevitable."

In the summer of 1890 I saw a case of pelvic abscess with Ralph M. Mead, of Brooklyn. The patient was twenty-six years of age, a multipara, and her youngest child was but six weeks old. Dr. Mead had charge of the case but a few days, and finding a large mass of inflammatory deposit extending across the pelvis, associated with an irregular fever and accompanied by vesical irritability, he suspected the formation of pus. The labor had been long, and was followed on the fourth day by a severe chill, fever and sweat. She nursed the child for about two weeks. When we entered the patient's bedroom to make an examination, we were shown a chamber partly filled with pus that the patient had passed with some urine. There was no opening into the vagina,

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<sup>1</sup> Krankh. der weib. Geschlechtsorgane. Leipzig, 1880.

so we knew the abscess had ruptured into the bladder. On careful examination it was found impossible to approach the abscess by the vagina. After consultation with Dr. L. G. Baldwin and Dr. Mead, it was determined to open the bladder, find the cavity and drain it, as should be found best, either by the abdominal wall or through the vagina. The patient was etherized and the vesico-vaginal septum cut through. The abscess pushed the upper wall of the bladder forward, and a small opening was noticed just above the cervico-vesical junction, through which the pus had passed. This was enlarged by a divulsor sufficiently to pass the finger into a cavity the size of an orange. A pair of Emmet's scissors (sharp pointed and curved on the flat) was pushed through the tissues, between the cervix and bladder, by the left hand; one finger of the right hand pushed down the bottom of the abscess cavity, so that any large pulsating vessels might be recognized. This opening from the vagina to the abscess was stretched until it would admit several fingers. The question now came up whether to close the hole in the so-called posterior wall of the bladder, and it was decided that in order to insure a rapid flushing of the cavity, in case of necessity it would be wiser to leave it open. The vesico-vaginal opening was left, for fear of the formation of a clot in the bladder—a very painful condition—and because nature would close it in a short time. A glass tube was passed into the abscess through the vagina. In a few days the pulse and temperature were normal. The above case is the only one I can find on record where a vaginal cystotomy has been done to reach an abscess. Dr. Emmet saw a patient who had a vesico-vaginal fistula, caused by an abscess between the vagina and uterus that had emptied in both directions. He laid this open from the vagina and closed the bladder opening with complete success.

*50 E. 30th Street.*

#### DISCUSSION.

Dr. BYRNE.—Certainly the treatment adopted in this case is novel to me and extremely interesting and ingenious as well as successful. I would like to ask Dr. Buckmaster if I understood him correctly when he says that not only the fistulous opening into the bladder, but the incision made to reach the abscess, closed without suturing.

Dr. BUCKMASTER.—Both the opening from the abscess to the bladder and the opening from the vagina into the bladder closed completely. Six months after the operation the scar could scarcely be seen on the vaginal wall.

Dr. BYRNE.—The raw surfaces must have been handled by the introduction of the tube, and it is unusual for the incisions into the bladder to close entirely under such circumstances.

Dr. BUCKMASTER.—I think I omitted to state that in the opening from the abscess cavity into the vagina I touched the edges which were absorbent with equal parts of carbolic acid and glycerine to prevent the absorption of this material which flowed over it. The union of the bladder and the vagina was absolutely perfect.

Dr. BYRNE.—In the experience of Drs. Emmet, Sims and others, myself among the number, who have treated chronic cystitis by vesico-vaginal drainage, the great trouble has been the partial closure of the incision, even when the glass button and other means have been adopted to keep it open. It was on account of that difficulty and the accumulation of phosphates around the opening that suggested to me the propriety of incising the bladder with a heated knife, which will not close until after drainage has been made to the fullest extent. I am not aware that I have ever seen an incised wound of the bladder in the vagina close completely without surgical interference. Has Dr. Skene ever seen such a case?

Dr. SKENE.—I think I have. I know the importance of the question raised, Mr. President, and also how difficult it is to keep an opening of that kind from closing, and I know that the method adopted by yourself has saved us a good deal of trouble in performing vaginal cystotomy, and is a great advance on any kind of drainage-tube that can be employed. There is only one thing which approaches it in utility, and even this is extremely difficult sometimes, and that is to make the incision and then stitch the vesical and vaginal mucous membranes together. This is a difficult operation, and answers no better than incising with the galvano-cautery knife.

I recall one case, which Dr. McNaughton may perhaps remember—that of a young girl with hæmaturia. We proved that the bleeding came from the bladder and not from the ureters or kidney. The use of the cystoscope showed what appeared to be an imbedded calculus surrounded by a sort of fungous vascular growth. A sketch was made of the conditions found, and we opened the bladder, and found the whole thing was made up of this fungous growth, with a little calculus imbedded in that fungus; the portion seen by the cystoscope was the entire size of it. To that extent the diagnosis was correct, but I was mistaken in the size of the calculus. The growth and the small calculus were both removed, and no effort was made to close the fistulous opening made by the scissors. It was a clean incision from the vagina into the bladder, and the reason it was made in that way was because we had no means at hand to operate otherwise, not that we considered it the best way of doing it. In that case we left the wound without any sutures, not knowing but this fungous growth might re-form and require

a second operation. Although we do not often get such a result, we certainly did in that case.

Now, while I have answered the question, Mr. President, I would like to say a word about the paper as long as I am on the floor. Of course, we all know that the question of pus in the pelvis—the pathology of such condition—has been very decidedly modified of late years. I think there was a time when everything of the kind was considered pelvic cellulitis, unless the suppuration was the result of hæmatocele. Then we got to know more about salpingitis and pus formations, and also pus formations in the ovaries, and then I think that led some of us over to the other side, and then we were prone to think pelvic abscess was limited to pyo-salpinx, or pus in the ovaries, and that cellulitis, as a rule, was something that only existed in the experience of some of the less progressive. When post-mortem cases were offered to show that there was such a thing as cellulitis, some would meet that by claiming that it was one of those rare occurrences in which the pus formed in the ovary or in the tube and burrowed into the broad ligament, and hence set up a secondary cellulitis, but it always began in the tubes and ovaries. The outcome of that was that in all of those cases of pelvic abscess the treatment was of necessity laparotomy. And I do not think I exaggerate very much to-day when I say there are many who would insist upon the point that if we had good reason to believe that there was pus in the pelvis that it should be managed by laparotomy for explorative purposes, and then curative measures should be adopted when the exact location of the pus was found.

I still maintain that we have cases of pure and simple uncomplicated pelvic cellulitis, because I have seen it post-mortem where the tubes and ovaries were in perfect condition. Then, again, I believe we have secondary cellulitis as a result of burrowing abscess of the ovary or Fallopian tubes. At any rate, in the matter of treatment I have decidedly settled the question in my mind in this way: When I find pus that is pretty surely in the tubes or ovaries, and not directly connected with the cellular tissue or any of the pelvic viscera, except by inflammatory adhesions—I mean where the pus wall remains and does not extend into the cellular tissue, where there is a possibility of getting between the uterus and broad ligaments, and this pus in the tubes or ovaries—I believe laparotomy is the legitimate and by all means the most satisfactory method of dealing with it. Some of the operations, and indeed many of them under these circumstances, are brilliant, but when we have a pelvic cellulitis as a primary affection, or a cellulitis secondary to salpingitis or pyo-salpinx, I believe that in both of these conditions the proper method is to get at that pus and evacuate it through the vagina, or do as Dr. Buckmaster has done in this case.

I would make that clear distinction between the character of the cases and the methods of treatment. I feel perfectly confident that those who insist upon opening the abdomen in all cases, and find a reason for so doing, are half wrong. Those who object to opening the abdomen, but insist upon finding the pus through the vagina, are also half wrong. The only question is, can we make a differential diagnosis between these cases? I think in the majority of cases we can.

I will not dwell on that point, but end what I have to say by referring to Dr. Buckmaster's case. We have all seen similar ones, and what has been to me the most annoying and puzzling is where the pelvic abscess opens into the bladder. If it begins in the ovaries or tubes, it must, in order to get to the bladder, establish a cellulitis. These cases have been exceedingly troublesome, and sometimes we have not succeeded in finding the pus through the vagina, and the discharge has gone on and the cases were lost.

I recall such a one which if I had it to deal with to-morrow, with the light thrown on the subject by Dr. Buckmaster, I feel sure I could save the patient. It is entirely a new procedure, this of Dr. Buckmaster's, but an excellent one, I think, and it should have a fair trial.

Dr. MADDREN.—I would like to ask Dr. Buckmaster how large an incision he made in the vaginal septum, or how large an opening he made from the vagina into the bladder, and how he found the opening into the bladder, whether by illumining or by other means.

Dr. BUCKMASTER.—I made an opening of about two inches. I first searched for it with my finger, and I thought I found it in the so-called posterior wall of the bladder, and then made the opening larger and saw it.

Dr. MADDREN.—Were you unable to find any evidence of the abscess by palpation of the vaginal wall?

Dr. BUCKMASTER.—There was so much exudation that it felt hard, like a board; there were no signs of fluctuation whatever.

Dr. MADDREN.—Did you use a mirror to see it?

Dr. BUCKMASTER.—No, it was not necessary; the speculum drew the perinæum well back, and it could be seen very well with the patient in Sims' position.

Dr. MADDREN.—It seems to me, Mr. President, that this was a very brilliant manœuvre. I have never heard of nor seen anything of the kind, and I believe that it will reach a class of cases that have been very unpromising in the past.

I hoped that Dr. Skene would tell us what he thought about the cause of these troubles being due to pelvic hæmatocele. I would like to know if his views have undergone any change on that subject.

Dr. SKENE.—I have undergone no change of head or heart on the pelvic hæmatocele question, Mr. President, except that I believe now that some of the cases of pelvic hæmatocele have their origin in ectopic gestation. I believe that cases in the past, which were supposed to be hæmatocele pure and simple, are known to-day, some of them at least, to be due to extra-uterine gestation; but I still hold we may have both intra-peritoneal and sub-peritoneal pelvic hæmatocele entirely independent of extra-uterine gestation, though I believe experience has shown that we get hæmorrhage quite frequently from that condition of things. In other cases, where the hæmatocele is the result of the rupture of a vessel and not due to extra-uterine gestation, if suppuration follows, of course we will have pelvic abscess. If the bleeding is from the ovary or the fimbriated extremity of the tube, the accumulation of course will be in the sac of Douglas; if it is sub-peritoneal, the peritonæum is raised up, and the accumulation is in the cellular tissue; and if it is not all cared for by absorption and goes on to suppuration, then of course we have pelvic abscess, behaving perhaps not different from any other pelvic abscess.

Dr. BYRNE.—I cannot help expressing my pleasure to hear the conservative views set forth by Dr. Skene with regard to the treatment of pelvic inflammations and suppurations, and the importance of differentiating between a pure and simple pyo-salpinx, uncomplicated, and a pelvic inflammation and suppuration as a consequence of pyo-salpinx and adhesions of the tube and probably ovaries to the other parts. I am convinced that there are many cases of pyo-salpinx that recover without laparotomy and without removal of the tubes. I am sure that I have met with and treated such cases many times by the introduction of a trocar and removal of the pus per vaginam, and I am sure many of those cases got better, although it is true some of them did not. I believe that we have a pure and simple inflammation of the connective tissue of the pelvic parts independent of tubal or ovarian inflammation.

I believe that the origin of pelvic cellulitis in a great many cases is due to a trifling hæmorrhage, not sufficient at first to produce what might be called a tumor, or appreciable, but a slight extravasation of blood within the folds of the broad ligament.

We know that the utero-ovarian veins are very large, especially in multiparous women; we know that they have no valves; we know also that such veins once distended, as they are during gestation, never resume their original calibre; and we also know that varicose veins are very liable to put on inflammatory action.

Now, I believe, as I said before, that a phlebitis in these parts is very often the origin of pelvic cellulitis and pelvic abscess.

With regard to the possibility of a patient's recovering through the curative efforts of nature after a rupture of a pelvic abscess into the bladder, I can recall one instance where the patient yet lives whose pelvic abscess did rupture into the bladder, and the result was a copious discharge of pus through the urethra. But, fortunately for her, it also subsequently ruptured into the intestines. The opening into the bladder closed, and finally the pelvic abscess dried up and the opening into the intestines closed, and she is perfectly well to-day. There was no treatment other than washing out the bladder with warm borax and water.

I must say the treatment resorted to by Dr. Buckmaster is well worthy of consideration. It is an ingenious and a novel method of reaching a very troublesome ailment.

Dr. MADDREN.—Did Dr. Buckmaster have any difficulty in getting out the bulbous portion of the drainage-tube after the abscess cavity contracted?

Dr. BUCKMASTER.—No, it shelled out very readily.



## INFLUENCE OF PUBLIC OPINION ON SURGICAL PRACTICE.

BY EDWIN A. LEWIS, M.D.

Read before the Brooklyn Surgical Society, February 5, 1891.

In this century of progress, and particularly in this last half of it, we are all proudly aware that we live in times of active advancement in all departments of the arts and sciences. As we look back twenty or thirty years and make comparisons with the present, we observe that we are in almost a different world as far as methods of daily life and communication are concerned. Any revived ancestor of ours of one hundred years ago would have to learn over again how to live by our present methods. No art or science has made, or is making, more honorable or substantial progress than that which deals with the relief of human suffering and disease. It is not of this, however, that I wish to speak. This is an age of intelligence and culture—an age of books and magazines and newspapers. Among the multiplicity of subjects to engage the writer's attention, those which relate to medical matters offer a wide and attractive field.

*First.* Gentlemen of scientific attainments write books and monographs on scientific subjects. These works are not read by the laity. They are, naturally enough, not understood by them. Neither is their

attention or interest enlisted. These are the works found in medical libraries and on the shelves of the busy practitioner, from which he gleans correct information on medical and surgical subjects.

*Second.* A large number of ignorant or unscrupulous men, or both, write and distribute pamphlets and books purporting to contain medical information, but the effect of which is most pernicious. The object of these is almost always to advertise some nostrum or induce the unwary and simple-minded to submit to useless or even harmful treatment.

These publications may include even the class of books which have such titles as "Every Man His Own Doctor," "The Household Physician," etc., etc.

*Third.* The secular press and some of the better magazines have taken up medical matters, and almost daily one may read descriptions of wonderful surgery and marvelous cures. Grave discussions are entered into and astonishing conclusions reached. Not long since the daily press put forth most astounding claims for a certain French elixir. Physicians are not yet done with the evading of searching questions from fair lips in regard to this, while they with difficulty repress a smile. Even as I write, the public are deluded by extravagant claims made for another newly-discovered remedy which promises to stand the test of scientific investigation and trial and prove a boon to mankind.

The distinguished gentleman who discovered and is introducing this remedy never has thought of making any such claims for it as the irresponsible daily writer wildly sets forth in his paper.

By such means as these that I have detailed is the great public educated in medical matters. In our day, everybody reads. Medical topics always interest the public. But the kind of literature which is offered is so unscientific, if not positively untrue, as to be harmful rather than of use. Again: It is only of late years that the public has been brought to see the usefulness of health boards in cities, to help control contagious diseases. Even to-day the poorer classes, who congregate in tenements, are apt to look upon the health office and the visiting health officer as a tyrant endowed with certain legal rights which they are powerless to resist when he enforces an early funeral in a case of diphtheria or isolation of the family in scarlet fever. The richer, or better educated, are apt to be seized with the most senseless panic on the announcement by the doctor of the advent of any contagious disease. The simplest cases are often magnified by the fears of the family into grave disorders. Neighbors, sympathetic but frightened, decline to even go to the door to leave a message, and go so far as to choose other streets to pass through.



So we may acknowledge that the general public is over-educated and badly educated on matter medical and surgical. Still, the general public, being intelligent and inquisitive, has its opinion to offer on every case. It reads prescriptions more or less understandingly; insists on knowing, when it can't make out the prescription, what the medicine is and what it is given for; prescribes for itself with the greatest freedom and recklessness, and, as a rule, only sends for the doctor when it becomes somewhat alarmed, and even then principally for some one on whom to shift responsibility. It would go on prescribing if it could, and it often does try. The doctor himself in this generation—and perhaps I ought to say country—does not command the respect to which he is entitled; at least he has to labor long years to put himself in position to demand the consideration which is really his due. The causes which lead to this are, first and principally, this same bad education of which I have spoken. The intelligent community has been anxious to read on medical topics. The literature which would have enlightened it it could not understand, and was not interested to read. The literature which it has absorbed has been misleading and incorrect while dressed up to be readable. So, while thinking it has important medical knowledge, it is really worse off than if it pretended to none at all.

Other reasons influence this condition of things. The large number of medical men compared to the population makes the competition for practice very strong. Many a doctor receives suggestions from outsiders, or members of the family, with apparent equanimity, while annoyed in reality; and puts up with interference and disregard of directions almost to the loss of self-respect, for fear of being supplanted by some neighboring physician if he rebels. Doctors are so plenty and so anxious for practice that no small class of people now are in the habit of employing a physician much as they patronize a grocer or hire a carpenter or glazier. This unfortunate condition of things works badly on both parties. It is impossible for a doctor who knows he is the third one employed by a family in as many months, and who recognizes the fact that he may or may not be employed again, to take the personal interest in any given case that he would if he were the regular family attendant. The doctor, being only human, most naturally does what he considers his full duty in regard to the case, without allowing himself to take any personal interest in it. He does not feel the care that he does when treating some member of a family who depend on him and look to him for advice in all matters medical. Thus on the one side the doctor may not give the thoughtful care to a given case which he would if he could feel a more personal, in addition to a legal and scientific responsibility, while on the other hand the

family loses that special medical attention which they would gain if they put themselves entirely in the hands of their medical adviser without continually doubting and suggesting.

Again: The laws governing medical education have been so diverse in different States, and many times so lax, that not only very inadequately educated men could practise legally, but even rank quacks and pretenders could flourish. Even at this time I believe that there is one State in the Union where the only legal qualification for a physician is a certificate of good moral character. I have myself known of a medical student, hardly through his first course of lectures, who attained quite a large summer practice in the interval between lecture courses, and thereby earned money to complete his education. He was intelligent and careful. He graduated afterward with credit to himself, and is now a regular practitioner in good standing.

Happily, this state of affairs is being rapidly remedied. The misguided public is being protected against itself by appropriate legislation. The medical schools are lengthening their courses. State examinations are being instituted. Preliminary examinations are required, and we may hope soon to see the whole profession made up of properly accomplished men.

It is not necessary to cite examples to prove the foregoing statements. It seems that they are so well known and appreciated that argument is not called for.

Granting, then, that we have a meddlesome public to deal with, one that thinks itself quite well informed on medical matters, but whose absolute scientific knowledge is really *nil*; one that is anxious to give advice and to be taken into consultation, at the same time one that assumes no responsibility, it must follow that certain popular ideas pass current which it is impossible to explain away and useless to argue about, such as the belief that in injury to the arm or leg, if the fingers or toes can be moved, there is no fracture.

This Society will not, of course, discuss popular notions and prejudices that affect medical cases only. There is sufficient material in the realm of surgery to occupy our attention. We may assert that no conscientious surgeon will ever neglect to urge with all his power any line of surgical treatment that is plainly indicated, whether operative or otherwise. If he fails to receive permission to institute such measures for relief as are clearly appropriate, he should either withdraw altogether, or, possibly, notify the patient and family that his responsibility for results has ceased. Even then, if he continues in charge and unfavorable results follow, he is apt to be blamed. Perhaps justly. The safest thing to do is, retire from the case. This statement refers to that class of cases where there is no scientific alternative.

Sometimes it happens that care of a case cannot be given us, as in hospital practice, where an operation is clearly indicated, but permission to perform it refused. Then the surgeon must shelter himself by consultation, and by clear and forcible statement to the patient and friends of the dangers of refusal. Then let him get the best results possible by such alternative treatment as can be adopted. This state of affairs may happen in private practice. It occurred in my practice once that an old lady declined an operation for strangulated hernia. Her friends approved. She absolutely declined. She was informed that she would die if she persisted in her refusal; but she was firm. And she did die. In this case, with such a clear statement of the dangers of declining treatment made to both patient and her children, it did not seem necessary to refuse to attend. Such services were rendered as were possible under the circumstances, and the death certificate set forth fully the fact that the patient had declined treatment.

Again: It happens that many operative procedures are advised that may be fairly termed operations of expediency. It is in this class of cases that our "Committee on Sickness" make their opinions felt. "The patient is not strong enough," says one; "I do not believe in it," says another; "I do not think it will do any good," says a third. And so on, till the number of objections equals the number of this particular committee, all delivered with the gravity due to years of study and experience in such matters.

Let me cite one case. A man had suffered for some years from a growth which he believed to be benign. It finally became so large and troublesome that he consulted a surgeon. The tumor was so situated that it could be removed without special danger. It presented a large, ulcerated surface, from which ichorous, foul discharge exuded, with frequent hæmorrhages. It was pedunculated, and a malignant growth. Operation for purposes of relief and palliation was advised. The patient agreed at first, but was influenced to delay. After some months he again sought advice. Again he agreed to an operation, and a day was fixed. Officious relatives objected, and again he declined. At present his condition is most pitiable. Months have elapsed. It is too late for any surgery to be of benefit. There remains only the prospect of continued pain and increasing weakness until the scene closes. Would surgery have cured this patient? Oh, no! But his life would have been prolonged in comparative comfort. It would have been expedient.

Public opinion so condemns certain proceedings that they are rarely mentioned. Phlebotomy is but seldom done now; but what physician does not every year see cases where it would be of advantage. Should he propose and insist upon it, he would probably lose the good will

and patronage of that family. It would be a bold surgeon who would at this moment propose to treat abscess cavities of the lungs by incision, curetting and free drainage. It seems not improbable to me that this may ere long be a not uncommon proceeding. A most distinguished surgeon of New York, not many years ago, asserted boldly that operations on the abdominal cavity would become frequent and safe. Even the profession at large, while it listened with forced respect to his words, failed to agree with him. He was half a generation ahead of his time and, unfortunately, did not live to see his prediction verified. In fact at the time he made it, he himself, distinguished as he was, would have stood a good chance to be sued for malpractice, and mulcted in heavy damages too, had he done an unsuccessful laparotomy. His bold utterance in regard to the late President Garfield excited general surprise. Yet who doubts but that at this date, in a similar case, laparotomy would be promptly done?

We conclude, then, that surgical practice is influenced by public opinion in certain cases :

*First.* In cases where operation might be of service, but where even professional opinion does not always approve: for instance, venesection and operations on the lung substance.

*Second.* In cases where operations of expediency or palliation are indicated and advised. Here the interference of relatives or friends often hampers the surgeon in doing what he thinks is his duty.

*Third.* In cases of distinctly indicated operations, usually for recent injury, where ignorant prejudice wilfully opposes competent surgical advice and endangers or destroys the life of the patient.

What remedies, if any, can be suggested for this existing state of affairs?

It is a condition thoroughly established, not easy to meet. It seems almost hopeless to attempt to influence the general public by literature of any kind. That which they have is more to their taste than any approved books or pamphlets would be. Argument and explanation fail with the majority, partly because they cannot and partly because they do not want to understand. They cannot appreciate that their opinions are not entitled to weight. When the unexpected happens from unforeseen causes, they are ready with an "I told you so," and their self-confidence is increased. Moreover, surgery is not a fixed science, and the best men not unfrequently differ in regard to what is best to be done.

It would seem that the shortest and best way out is to increase public confidence in the profession by raising its standard, so that the people will, with one consent, apply to doctors for guidance in their medical beliefs, and have faith in information received from them, even

if the reasons therefor be not fully understood ; so that the daily paper and the thousand-and-one pamphlets and advertisements that fall into their hands may not be accepted as the true scientific exposition of the various subjects treated of. We are on the road to this through the higher standard of requirement for medical men, both preliminary and for graduation, as has been discussed earlier in the paper. When it ceases to be possible in this country for a man to go from the plow to the dignity of a full-fledged M.D. in two short courses of medical lectures of twenty weeks each, without the ability to spell correctly or even write legibly ; when a high school or even a college education becomes a prerequisite ; when at least three years of continuous study on medical topics are required ; when a State examination in addition to a graduating examination becomes a general requirement, then we may look for more consideration and respect from the great public which we serve. For it will be quickly appreciated that a higher grade of qualification is necessary ; and there is, the world over, a respect paid to scholarly attainments. Let me not be misunderstood. The profession in this country is made up of honest, honorable, hard-working, intelligent, skilful men. Many of the most brilliant achievements of medicine and surgery have been attained here. It may, however, be said, without casting a reflection on any one, that the standard for the entrance degree should be raised.

This subject is a broad one. It cannot be *fully* considered in such a brief paper as is suitable to present at a society meeting. I have endeavored to touch on the principal points which the subject suggests, to pave the way for general discussion.

I would offer as conclusions :

- 1st. That surgical practice has certain limitations due to public opinion ; and
- 2d. That no efficient and prompt remedy is at hand, the raising of professional standards and the better education of the public being among the methods which promise to be of advantage.

#### DISCUSSION.

Dr. WIGHT.—It would seem to be largely a work of supererogation for me, after so careful and able discussion of the subject, to take it up myself ; and what I have to say would be, perhaps, by way of re-forming some points more than by way of addition. But it occurs to me, and I am now speaking toward a remedy, that we, as surgeons, do forget, and often in a very strange manner forget, the great and important fact of the limitations of our work. There are certain things that we can

do and do exceedingly well, but there is a large region of outlying territory in which we cannot do anything whatever; that is, there are limitations to our work of the most important kind, and the sooner we find out and make the public know that there are such limitations the sooner will we come to an understanding with them and gain their entire confidence.

Just at this point I want to say a word—that I have not the highest respect, not the sincerest regard, for those gentlemen, whoever they may be, or however they have lived, who can do, or claim that they can do, a great field of work over in that impossible region where men cannot work, where they cannot accomplish the things they claim to accomplish. Do you not see that they are the most baneful and undesirable of all men in the world? They profess to do those things, and they make the public believe they can, and thus they unnecessarily raise the standard of our profession so high that no man ever will or ever can attain to it. And yet the public believe them all the same, and they hurt us who have attained to simple, ordinary proficiency in our practice. And just so soon as men admit that they cannot attain to the impossible, that these men who are ready, in season and out of season, and operate when they ought not to operate, that make an operation successful and the patient very unsuccessful, so soon will it be the better for us.

Now, more than this. All that I need to do is to open the question, and you will put in all the finer outlines of the picture. Do you know that the public are co-partners in this work? This is simply a contract, and a contract in which the public have rights, and they assert their rights to the very utmost. It is a civil contract, and they have a right to their say in the matter. If a man needs to have a leg cut off, and I say it needs to be cut off, he can have it stay on if he chooses, and I cannot do anything about it; I cannot take him in and cut it off. It is an absolute civil contract, and that runs all through the profession, and we are legally held to that responsibility which binds us to a legal contract. If a man doesn't want us to doctor him, all he has to do is to say so, and we can't help ourselves. It is again a complete and definite civil contract, and it is a blessed thing to have it so. It is a very desirable and important thing for every man to have his day in the medical court as in the civil court; it belongs to him with his own witnesses, and he can make his choice.

Again, if we did, as the doctor most nobly said, elevate our profession, push it up—I do not mean to that impossible field, but I mean a broad, sensible plane of work to which all ordinary respectable men can attain—and if we would fix a rational and reasonable practice,

and stand upon that and base our civil contracts upon that, and have it understood that our contracts are made silently, if you please, in that way, then I see not so much difficulty.

Then there is a wide field in the coördinate relations of surgical men, and that is very important. And men are so sensitive about it that I hesitate to tread upon this territory in these days. I could open up to you whole chapters of personal experience in that matter, but I think the less I say about it the better, for perhaps the words I might utter would carry with them more than I wished, and perhaps all I need to add is that the old *esprit de corps* is in the past and seems to have gone to its silent grave.

Dr. TERRY —There is one thought I would add here, although I do not know as it is directly related. I have noticed a growing sentiment within the last two or three years among a class of people who are not educated, and it is that they sometimes request surgical interference. I have been perfectly astonished at their familiarity with operations, and, as I said, asking on certain occasions for their performance. There has been in this certainly a change in public feeling that is marked and quite surprising; so I apprehend, as this feeling increases, surgeons will not have the difficulty in securing operations which they have had in the past.

Dr. WACKERHAGEN. —It seems to me that the general public read a great deal too much on medical and surgical subjects in scientific journals as well as in the daily papers; but I do wish that the intelligent public could read this paper by Dr. Lewis, because I think that it would be of great benefit to them.

There is a point that I think might be made in referring to the subject, and that is the arrangement in regard to the division of specialties.

I would suggest that the abdomen and chest be in charge of specialists who will treat both the medical and surgical diseases appertaining to these localities; that medical and surgical diseases of the brain and spinal cord be included under a second division; and that medical and surgical diseases of the extremities be taken under a third department.

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## *EDITORIAL.*

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### THE EVILS OF RESIDENT JANITORS IN SCHOOLS.

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If janitors of schools are ever permitted to reside within the school building, it should only be when there are no children in their families. Time and time again it has happened that contagious disease has attacked the children of janitors, and that several days have elapsed before the patients were removed. During the interval large numbers of children have been exposed, and it is to be presumed that the disease has thus been spread.

In our judgment the family of a janitor should reside outside the school for other reasons as well. The most careful housekeeper knows how difficult it is to prevent the odors of the kitchen from finding their way into parlor and halls; and those who have had much to do with visiting schools, where the family of the janitor resides on the premises, have doubtless detected these same odors in the school-rooms.

A recent case which occurred in New York emphasizes the dangers referred to. Two children of the janitor of Public School No. 43 were found to be suffering from malignant diphtheria. A few days after, a child of the janitor of Grammar School No. 8 was reported sick with diphtheria.



Dr. Edson, of the New York Board of Health, states that during the year 1890 six instances of diphtheria in the families of janitors living in public schools were brought to his notice.

The practice of having janitors' families live in the schools is a dangerous one to the public health, and should be discontinued.

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### SCHOOLS IN TENEMENT-HOUSES.

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Dr. Charles W. Allen, of New York, has done the public a service in calling attention to the prevailing contagious diseases in houses which are occupied as residences and schools at the same time. As a result, the New York Board of Health has closed a number of tenement-houses in which schools were maintained. The dangers referred to in the case of the janitors' families are here increased just in proportion to the increase in the number of children residing within the buildings. A thorough inspection would doubtless show that many private houses are used as private schools, in which the danger of contracting disease is as great as in the tenement houses.

The records of the Brooklyn Health Department contain evidence that many of these houses are utterly unfit for the purposes of a school, so deficient are they in ventilation and other sanitary requirements.

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### OBITUARY.

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#### WILLIAM HENRY STEVENS, M.D.

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Dr. Stevens died in this city on February 22d. The cause of his death was a peripheral neuritis due to a dissecting-wound on the left forefinger received in December. On January 23d he assisted in an autopsy on the body of a patient who had died of hydrophobia in New York. To avoid any risk of contracting this latter disease, he was inoculated by Dr. Paul Gibier, of the Pasteur Institute, this treatment being completed on February 9th.

Dr. Stevens was a graduate of Williams College, of the class of 1879, and received his medical degree from the College of Physicians and Surgeons, of New York. Previous to his settling in Brooklyn, he had practiced for six years in Wyoming.

## PROCEEDINGS OF SOCIETIES.

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### BROOKLYN GYNÆCOLOGICAL SOCIETY.

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A regular monthly meeting of the Brooklyn Gynæcological Society was held in the Society rooms, Friday evening, January 2, 1891, at 8 o'clock.

Dr. Jewett in the chair.

Present: Drs. Jewett, Frank Baldwin, Emery, Matheson, Maddren, Gordon, Corcoran, McEvitt, Chase and L. G. Baldwin.

The minutes of the previous meeting were read and approved.

The paper of the evening, entitled "An Improved Method of Managing the Cord in Prolapsed Funis," was read by Dr. Z. T. Emery.

This paper was discussed by Drs. F. Baldwin, Corcoran, Matheson, Jewett and McEvitt.

#### CASES AND SPECIMENS.

Dr. Jewett related an interesting case of severe vomiting of pregnancy which was arrested and controlled immediately after dilatation of the cervix was begun, and did not return.

Dr. Chase presented a specimen of what he believed to be a small pediculated fibrous tumor, which he had removed from the cervix of a woman who had three years before ceased to menstruate. He thought these polypi were not commonly found in women who had passed the menopause.

He also presented a specimen of a cyst he had removed from the vaginal wall of a woman who was sterile.

Dr. Corcoran mentioned several similar cases of cysts growing from the anterior vaginal wall.

#### DISCUSSION OF DR. SKENE'S PAPER, READ AT THE MEETING OF MAY 2, 1890.

Dr. JEWETT.—The author of the paper is to be congratulated on his selection of a subject. He could hardly have chosen a topic of greater general interest than the relative value of opium and cathartics in the treatment of peritoneal inflammation following abdominal operations or labor. The advocates of saline cathartics claim that they deplete the vessels of the affected parts, limit the exudation, promote the absorption of fluid exudates that have already accumulated in the peritonæum, assist the elimination of the products of bacterial activity,

if not to some extent the living germs themselves, and tend to prevent visceral adhesions. Opium, on the other hand, splints the bowels, favors adhesions, pockets the septic fluids, and locks up the emunctories. Yet the question of relative value of the two methods of treatment, at all events the particular indication for catharsis or narcosis in a given case may fairly be regarded as still *sub judice*. Probably something may depend upon the form of peritonitis. Opium may succeed better with the non-septic, cathartics with septic forms of inflammation, yet I am disposed to think the cathartic plan is suited to both. It has doubtless happened to all present, as it has to me, to see the temperature fall under opium in certain forms of peritoneal inflammation, and that, too, nearly in proportion to the amount and duration of the dosage. On the other hand, after a considerable experience with the cathartic plan, I am compelled to say that I have come to depend upon it almost to the exclusion of opium, not only in peritoneal, but in practically all varieties of post-partum sepsis. I am not able to make a statistical comparison of the two methods, as I did not, till a few moments ago, know the subject of the paper. My impression is, however, that the results have been much better under the new than the former plan of treatment. I have frequently seen pelvic inflammations which had been treated with opium improve immediately and permanently under the use of cathartics, and I have been struck with the fact that pain, even, is often quite as surely relieved as by the opium plan.

The author of the paper has alluded to the difficulty of administering salines, owing to the irritability of the stomach common in peritonitis. It has been my practice to precede the saline with ten grains or more of calomel. This is not in accordance with the plan approved by the advocates of the cathartic treatment. I believe it to be better, however, and more efficacious than salines alone. The calomel, if given with the least possible bulk of fluids, cannot be rejected, and after three or four hours the stomach will generally be more retentive, and the saline can then be given usually without difficulty. Catharsis, too, is induced with much more promptness and certainty with the aid of the calomel. Should the use of salines by the stomach be impracticable, a method which I learned from the writer of the paper may still be successful. I refer to the use of saline enemata. The cathartic treatment, however, like all others, to be most effective, must be resorted to early. Even so, it does not save all cases.

Dr. Skene has spoken of the value of opium in relieving shock. Of this there can be no doubt, especially in the shock that follows much hæmorrhage. As his experience has been large in abdominal surgery, I would like to ask his opinion of the value of flushing the

abdominal cavity with hot water for mitigation of shock. Another point on which I would be glad to hear his views is the use of the cold coil, both as a prophylactic and a remedial measure in peritonitis. This practice has the indorsement of good authorities, but my own experience with it has not been satisfactory. Possibly it is better suited to the non-septic inflammation that sometimes follows the most cleanly methods of abdominal section; but in post-partum sepsis it does not seem to me rational, and my clinical experience is in keeping with that opinion.

At the meeting of October 3, 1890, Dr. Jewett reported a case in which he had repaired an old perineal laceration immediately after labor. Despite certain theoretical objections to operating at this time, he had done the operation in several cases with satisfactory results.

In extensive old injuries the parts were subject to but little stretching or bruising in the birth of the child, and were therefore in favorable condition for repair. The lochia did not interfere with union, particularly if the external surfaces were kept clean by the use of an antiseptic dressing. The principal advantage in operating at this period was economy of time for the patient.

L. GRANT BALDWIN,  
*Secretary.*

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## PROGRESS IN MEDICINE.

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### SURGERY.

BY GEO. RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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#### UPON THE TREATMENT OF ECTOPIC TESTICLE.

L. G. Richelot (*Bull. et Mém. de la Soc. de Chir. de Paris*, t. xvi., p. 274). In all cases in which the non-descent of the testicle is complicated with congenital hernia, the radical operation for the cure of the latter is indicated. In those cases uncomplicated by the above, R., choosing the period of puberty as the one most favorable, places the testicle in the scrotum. He breaks up all adhesions which fix the organ in its pathological position, separates the fibres of the cremaster, forms a cavity in the scrotum, in which he buries the testicle. The spermatic cord is fixed to the walls of the inguinal canal by means of sutures, which are so placed as to only include the superficial invest-

ments of the latter; the vas deferens and spermatic artery are left intact. Reliance cannot be placed upon sutures in the organ itself and designed to hold it in position, for the reason that the scrotum soon becomes inverted and invaginated, the testicle returning to its former position. Castration is rarely necessary.

UPON THE TREATMENT OF INGUINAL HERNIA.

Ed. Bassini, Padua (*Archiv f. klin. Chirurgie*, Bd. xl., p. 429). The most frequently employed methods of the present day, according to B., are those of Wood and Czerney, of Heidelberg. These two methods represent almost diametrically opposite courses of procedures, the former seeking to close the enlarged inguinal canal by turning up a portion of the hernial sac, and over this turned-up portion closing in the margins of the inguinal canal and the edges of the external opening; while the method of Czerney seeks to remove the hernial sac and buries the neck of the same, closing the inguinal ring. Neither of these insures against recurrence, and in order to prevent this, the patient is compelled to wear permanently a truss. In order to avoid this necessity, B. makes use of a procedure having for its aim the restitution of the inguinal canal as it exists in the normal condition; that is to say, a canal having two openings—an abdominal and a subcutaneous one; and two walls—an anterior and posterior—through the middle of which the spermatic cord passes. The method has been employed in 263 cases of hernia since 1884. These were partly cases of irreducible (including 11 cases of strangulated hernia) and partly cases of simple reducible hernia. B.'s procedure is as follows: The aponeurosis of the external oblique muscle is bared and separated from the external to the internal inguinal ring, and loosened in two flaps—a superior and an inferior one. The spermatic cord and hernial sac are lifted and isolated from their surroundings and from each other. The displaced sac is now opened near its base and its contents examined. After replacing the intestine, the neck of the sac is twisted and secured by transfixing and encircling ligature, after which the sac is cut away at a point about a  $\frac{1}{2}$  ctm. below the latter. The cord is now lifted from the wound upon the abdominal wound, and a new posterior wall to the inguinal canal formed by uniting the isolated posterior edge of Poupart's ligament to the extent of from 5 to 7 ctm. upon the one hand, and a threefold layer upon the opposite side, this latter consisting of the external oblique muscle, the internal oblique, and the deep layer of the superficial fascia. Those sutures nearest the lower angle of the wound should include the edge of rectus abdominis. After replacement of the spermatic cord, over this latter the aponeurosis of the external oblique and the skin are closed by sutures. In cases of

congenital inguinal hernia, in case of a funicular peritoneal process of the tunica vaginalis, or, on the other hand, testicular, these are removed, reserving in the latter case only sufficient tissue to cover the testicle. In ectopic testicle this is sutured to the base of the scrotum. In females the round ligament may be removed entirely. Average time of healing twenty days. Mortality none. Recurrence in seven cases.

#### UPON THE TREATMENT OF OLD DISLOCATIONS OF THE SHOULDER-JOINT.

Theodore Kocher (*Deutsche Zeitschrift f. Chirurgie*, Bd. 30, p. 422). K. recommends the "rotation-elevation" method, introduced by himself in 1870, for the reduction of recent dislocations of the shoulder-joint, in cases of old dislocations as well. Twenty-eight cases are reported as having been treated in this manner, and twenty-five of these gave good results. In a portion of these cases even anæsthesia was not resorted to. Five of the cases had an existence exceeding four months.

The procedure is again described by K., and inasmuch as it is not generally understood, and as his description is eminently graphic and simple, it is here reproduced. The operation is divided into three stages: 1st. The elbow is abducted and pressed firmly against the body, or brought somewhat posteriorly and toward the median line. 2d. The elbow being flexed to a right angle, the arm is strongly rotated in an outward direction, until the forearm is pointing quite in a lateral direction; simultaneously, by means of a compress placed under the arm, the exit of the head of the humerus from its mal-position in an outward direction may be favored. A downward pull at this stage may be also useful, as suggested by Jersey. 3d. The rotation of the arm outward being still maintained, the elbow is lifted toward the median line, at the same time being carried as high above the surface of the body as possible. The external rotation of the forearm, which up to this point has been maintained, is gradually lessened, until at last the latter ceases entirely, and the hand of the affected side is placed against the chest wall of the opposite side, this constituting inward rotation of the forearm.

The general applicability of K.'s method is explained by the fact that it, of all methods, is designed to deal with adhesions. The great majority of old dislocations are of the subcoracoid variety; and K. found in eight cases in which resection was performed, and in one autopsy, that the most important adhesions exist between the acetabulum and the anatomical neck of the humerus. These are found in the region of the old rent in the capsule, producing narrowing of the latter and the lumen of the capsule itself, at the same time fixing firmly the head of the bone to the anterior edge of the glenoid cavity. K.'s pro-

cedure, in old cases particularly, therefore seems especially adapted in accomplishing reduction, lifting as it does the upper wall of the capsule from the glenoid cavity, at the same time opening the rent and relaxing the upper portion of the capsule for the return of the head. The regular occurrence of adhesions at the point mentioned is explained by the fact that the coraco-humeral ligament is not torn.

K.'s procedure does not involve accidental injuries to the nerve-trunks or blood-vessels; but fracture of the humerus may occur in old cases. This occurred three times, in one case the shaft giving way, and in two cases the head being broken off. No evil results followed these, however; the unreduced head remained in situ, but the upper extremity of the shaft found a resting place in the glenoid cavity, with a satisfactory final result. The only cases in which K.'s method was not successful were found, upon resection, to be complicated by fractures of the tuberosity or neck and their consequences (bony growths, etc.), being rendered thereby irreducible.

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## OBSTETRICS.

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BY CHARLES JEWETT, M.D.,

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### ANATOMY OF THE PREGNANT TUBE.

Klein (*Zeitschr. f. Geb. und Gyn.*, B. xx., H. 2). The author finds from his study of the subject that the tube sometimes becomes sacculated at the point where the ovum lodges, the ovum thus growing in a diverticulum of the tube. The wall of the tube becomes the more rapidly thinned in consequence of the saculation. The tubal decidua resembles in the main the uterine. It differs, however, in two respects. It contains, beneath the decidua, cell masses, connective tissue lines corresponding to the construction of normal tubal mucous membrane. It has furthermore near the muscularis an overlying zone in which are mingled decidua cells, muscles and connective tissue bundles.

Between the chorionic villi and the tubal decidua there is an extremely intimate relation. The decidua grows around the ends of the villi, presses upwards between the villi and this intervillous decidua is liable to become necrotic from pressure and from infarctions.

A reflexa was not found. This corresponds with the observations of most authorities.

The transformation of cylindrical epithelium into cubical is a characteristic mark of pregnancy in extra-uterine as it is in utero-gestation.

EXPERIENCE IN THE USE OF AXIS-TRACTION FORCEPS.

Nagel (*Archiv f. Gyn.*, B. xxxix., H. 2). N. has operated with the Tarnier, Breus and Simpson instruments, and he prefers the latter. He criticises the Tarnier forceps as being clumsy and having too slight a cranial curve. He objects to the Levret lock as superfluous and the tractors as complicated. Moreover the Tarnier forceps easily slip and are liable to injure the scalp. The Simpson forceps has the advantage that it is light and easily used. It fully accomplishes the objects aimed at in the Tarnier and avoids as far as possible all superfluous attachments. The English lock suffices perfectly in axis-traction forceps since the blades are prevented from springing apart by the action of the fixation screw and the tractors. The construction of the tractors is simple. It is the author's custom to complete the delivery with the axis-traction instrument. The danger of injuring the pelvic floor with the tips of the forceps blades is reduced to a minimum in the Simpson instrument, as the tips do not stand off from the head. Nagel thinks the axis-traction instrument should be used in all cases. While it offers no advantage in the low operation there is no objection to its use in such cases and the operator acquires a facility that will stand him in good stead in difficult extractions. The danger of the instrument in injudicious hands lies in the fact that it renders possible the use of an unsafe amount of traction force in difficult cases.

RUPTURE OF THE UTERUS DURING LABOR. RECOVERY.

Lund (*Nouv. Arch. d'Obstet. et de Gyn.*, Oct. 25, 1890) reports a case of rupture of the uterus in a secundipara with recovery. As the head had not engaged delivery was accomplished by podalic version. The predisposing cause of the rupture was a fibroid of the size of a foetal head, the laceration taking place transversely at the lower border of the tumor. Intestines prolapsed into the vagina. They were replaced and the uterus and vagina tamponed with iodoform gauze.

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PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

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ON ETHER DRINKING.

Mr. Ernest Hart (editor of the *British Med. Jour.*) has lately published some statistics and important information relative to the above



subject. The matter is of very great value, directly and indirectly. It calls attention to the internal use of a remedy which, as a powerful cardiac stimulant, has been used but little of late. The published statistics have been collected, in part personally, and also by communication with medical men, clergymen and others in the various parts of Ireland where the custom prevails.

The earliest history of the habit goes back to 1842. The greatest amount of ether used for drinking purposes was in 1876. A few years after this date there was a diminution in the consumption; but it has since increased, until at the present time the amount nearly equals that of 1876. The majority of the ether (methylated ether) comes from large English houses, being sent sometimes to wholesale Irish firms, who retail it, or directly to the smaller dealers. It is put up in stoppered bottles or metal vessels. It is sold to the consumers in groceries, taverns and public houses, selling for two cents (United States money) for two drachms. Its very small cost enables the dose to be frequently repeated. From two drachms to half an ounce is the amount usually drunk, and this is repeated from two to six times during the day, depending on the personal habits. One or two cases of confirmed drinkers are mentioned where one pint of ether was generally used, when on a debauch, in divided doses.

The amount that produces intoxication depends on the individual. The ether is drunk in a single swallow, sometimes diluted and again taken pure. The intoxicating effects are quickly produced, and quickly pass away. It is possible, therefore, as the author observes, for an habitué to become intoxicated many times in a short period.

A small dose causes a feeling of exhilaration, the drinker laughing, dancing and being quite wild in his movements. If the small dose be not exceeded, there is no period of marked depression following the stimulation; but in larger quantities a state of stupor is frequently present, and, as the effect passes away, a feeling of weakness is left.

It will be seen, in reading the individual accounts given in the paper, that mania is a marked feature very commonly presented, the drinkers often becoming very violent.

In moderate amounts no lesions, anatomical in their nature, are produced. Of the two intoxicants, alcohol and ether, the former probably causes more bodily derangement.

In ether drinkers who have continuously consumed large quantities a train of nervous and circulatory disturbances is generally present. Emaciation has been observed in certain cases, and occasionally the skin is of a cyanotic hue. The more moderate drinkers generally suffer from various forms of stomach troubles. In all cases there has

been observed a marked change, in the way of deterioration, in the moral character.

The relation of ether to insanity was also investigated. No satisfactory evidence of the drug being directly causative could be gathered, but physicians to certain of the insane asylums regarded it as detrimental in all cases where there was latent insanity. Death is probably not hastened in any great degree, although, by interfering with nutrition, the general health may become impaired.

Attention is called to the fact that there is danger to the user from having the drug near the fire or lights of any kind. The author believes that the practice probably prevails in certain parts of large cities.

It is interesting to observe how common the use of ether (as an intoxicant) must be, in the districts investigated, when the public conveyances are frequently impregnated with its odor.

This curious and novel paper teaches one valuable therapeutic lesson: The effect of the drug has been shown to be rapid and transient. In its use, therefore, as a cardiac stimulant this point should be recollected, and no long intervals should go between the time of giving the various doses. Its rapid action makes ether a safe and valuable remedy for hypodermic use in conditions of syncope.

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## PREVENTIVE MEDICINE.

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BY E. H. BARTLEY, M.D.,

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### CHEMICAL AND PHYSICAL CHANGES IN MILK UPON STERILIZATION.

In a paper upon this subject, read before the recent convention of chemists in Philadelphia, and published in the "Jour. Am. Chem. Soc.," Prof. A. R. Leeds gives the results of some extended experiments to determine what, if any, changes are produced by sterilizing milk. He states that on comparing raw and sterilized milk under the microscope, he only found that in the latter some of the fat globules had coalesced into larger ones, and that there were a few shreds or coagula of separated casein.

He could not satisfy himself that there was much difference in the behavior of raw, boiled and sterilized milk with dilute acid, so far as the size of the clots is concerned. It seemed to require more acid to completely precipitate the curd of boiled than of raw or sterilized milk.

He found that the albuminoids of boiled and sterilized milks are more completely precipitated by dilute acid than in raw milk—*i. e.*, after sterilizing, the albumen of the milk is completely precipitated by dilute acid; while in raw milk, serum albumen exists, and which is not precipitated by gastric juice. No change could be determined in the milk sugar until the heat had been kept up for six hours; then the sugar began to decrease.

The condensed milks of the market he found quite sterile, and that they corresponded, in above respects, to sterilized milk.

He found four samples of market milk to give, on cultivation for thirty-six hours, respectively 33,600, 42,000, 5,832 and 154 colonies.

Prof. Leeds finds that heating for a half hour, or less, completely sterilizes milk, and longer heating is not desirable.

#### DIPHTHERIA FROM LOWER ANIMALS.

Dr. T. R. Davison publishes (*Brit. Med. Jour.*, Oct. 25, 1890) the result of a careful investigation into the surroundings of houses where deaths from diphtheria had occurred. The location of his observations was in Buenos Ayres. He examined 260 houses where diphtheria had occurred, and states as his conclusion that the cause of a certain epidemic "is the presence of animals, especially hens and horses, in yards without any pavement or hardly paved."

"Of 260 houses which I examined, I found that hens were kept in 145, and of the remaining houses, hens were kept in houses immediately adjoining in 35 instances; the separation of the yards, in some cases, being so insignificant as to make the two houses a single one."

He cites nine histories which point strongly to the lower animals as the source of infection. He calls attention to the mortality statistics of the armies of England, France and Germany, which show a high mortality from diphtheria in cavalry regiments as compared with infantry regiments in the same army.

These observations are strongly suggestive, and may account for some of the strange outbreaks of diphtheria in country places.

#### THE POLLUTION OF PUBLIC WATERS.

One of the great problems of sanitation is the disposal of sewage. Heretofore the practice has been to pour it into a stream or other body of water, with great detriment to some body.

The "*Anti-Adulteration Jour.*," December, 1890, quotes Dr. Lee, Secretary State Board of Health of Pennsylvania, as saying: "At Bryn Mawr we have a farmer complaining that he cannot permit his milch cows to drink from a creek that is polluted by college sewage. The stream that takes the sewage from the State Normal School, at Millers-

ville, Pa., is so polluted that the farmers have to fence it off, that their cattle cannot get to it."

"A great deal of trouble comes from colleges and normal schools." Dr. Lee says that, as yet, there is no plan that can safely be adopted, on a large scale, without subjecting large cities to the liability to tremendous loss by the experiment in the disposal of sewage in any other way.

He reviews the methods that have been tried for small towns and hotels, but does not think them adequate for large quantities of sewage. He says: "We are coming to a time when nature, with crowded populations, will force us to more sanitary methods. In the European cities there is better water and cleaner streets than we have here, and the reason is that nature forced them to be more cleanly by way of self-preservation."

[We are informed that hygiene is one of the branches taught in the normal schools in Pennsylvania. Would it not be well for them to give an object lesson on the fenced streams?—E. H. B.]

#### POISONOUS MUSSELS.

A case of fatal poisoning of a mother and four children from poisonous mussels is reported by Sir Charles A. Cameron, M.D., in "Brit. Med. Jour." for July 19, 1890.

The first symptoms came on in twenty minutes after eating the stewed mussels; these were a prickly ("pins and needles") pain in the hands. Five persons ate of the dish, one lightly, and in one hour afterward one of the children died, and an hour later the mother and three other children. One child and the servant recovered.

The chief symptoms were: Vomiting, dyspnœa, swelling of the face, loss of coördination of movements and convulsions. The patients died asphyxiated. The mussels were fresh, and were obtained from a pond which was a mixed salt and fresh water pond, and received some sewage. The mussels, on examination, were found to have large livers and brittle shells. A leucomaine was extracted from the liver of the mussels which resembles Brieger's mytilotoxine ( $C_6H_5NO_2$ ). The liver seemed to be the seat of the poison, which had been before noticed by M. Dutertre, of France. The cause of this peculiar disease, the author thinks, is due to the foul water in which the mussels lived.

The livers of these mussels were examined microscopically by Dr. McWeeney, and in a preliminary note, published in the "Brit. Med. Jour.," September 13th, he describes at least five different organisms appearing in his cultures, one of which, he thinks, is the specific organism of the poison.

The important lesson is that mussels from stagnant or sewage-laden waters should not be eaten.

# PHYSIOLOGY AND EXPERIMENTAL THERAPEUTICS.

BY GEORGE T. KEMP, PH. D.,

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## ON THE FATE OF MORPHIA IN THE ANIMAL BODY.

In spite of the fact that many investigators have worked on the subject of the fate of morphia when once introduced into the system, our knowledge of this important point has been far from satisfactory. In the "Archiv. für Experimentelle Pathologie und Pharmakologie," vol. xxvii., 1890, pp. 336-369, we find an exceedingly interesting article on this subject by Dr. E. Tauber, of the Pharmacological Laboratory of Strassburg. (Ueber das Schicksal des Morphins im thierischen Organismus.) The article is of especial value in giving a careful resumé of preceding work, a new method for the quantitative determination of morphia, and an excellent piece of experimental-therapeutical work to determine the channels by which morphia disappears from the system. Morphia has been found in the urine of patients who had taken large doses of the drug, but the amount obtained has always been so small that, with the exception of a few authorities (Dragendorff, Kautzmann and others), the kidneys have not been looked upon as a very important channel of elimination. A common idea has been that morphia was oxidized and destroyed in the blood or elsewhere in the system, or was eliminated by the kidneys in some oxidized or otherwise altered form; and such oxidation products were found by several observers in the urine and in various organs, especially the lungs and liver. The main reason for supposing that morphia was oxidized in the system and destroyed in this way, was, that no other explanation of its disappearance presented itself. Morphia had been found in the stomach, intestines and fæces after ingestion of the drug by the mouth, but small importance was attached to this. Leineweber (1883), working with Marmé, had shown that morphia could be detected in the stomach after being subcutaneously injected, but he made no quantitative determinations. Hitzig injected a dog with morphia to anæsthetize him, and shortly after the injection the dog vomited. Another dog that was in the room ate the vomit of the first dog, and after a short interval was taken sick himself. In spite of the short time that elapsed between the injection and the vomiting in the first dog, Hitzig suspected that "considerable amounts of morphia must have gotten into the stomach, since enough was there to affect the second dog. At

Hitzig's suggestion, Alt of the University of Halle undertook an investigation of this matter, and his results are published in the "Berliner klinische Wochenschrift," 1889, p. 560. Alt found, that after a subcutaneous injection of morphia, vomiting took place both on a full and on an empty stomach, and in every specimen of vomit he found morphia without difficulty by qualitative tests. On studying the time required for morphia to appear in the stomach after a subcutaneous injection, he found after such an injection of 6-10 centigrammes (.9-1.5 grains) a weak but distinct reaction of morphia with iodic acid was obtained in  $2\frac{1}{4}$  minutes; after 5 minutes the reaction was quite marked. After 25 to 30 minutes the reaction was very strong; from this time on the reaction became less and less marked, and disappeared after 50 or 60 minutes. This result he obtained a number of times, and emphasizes this time-course of excretion of morphia by the stomach. In one dog, 660 cc. of acidulated water were run into the stomach through an oesophageal tube, and, after a time, 530 cc. were drawn off and analyzed by Dr. Baumert. It contained "a substance which could be isolated by the methods applicable to the isolation of morphia, and gave the characteristic reactions of morphia. From colorimetric tests the fluid contained at least .063 grammes (.95 grains) of this morphine-like substance (Morphiumähnlicher Substanz). From these figures he calculates that through the stomach of this dog, about 50 per cent. of the morphia injected must have been eliminated.

Tauber, in his experiments, supplemented previous work by quantitative determination of the morphia injected, and of that recovered from the stomach and fæces, as well as analyses of the blood, liver and kidney to find the amount of morphia contained in them. His method may be found fully described in his article from which this abstract is made.

It consists essentially of the following steps: In the blood, extract of organs, fæces, vomit, etc., precipitate the albumins by adding a few drops of acetic acid and boiling in an evaporating dish over a free flame. Filter hot through linen, and wash with distilled water containing a small amount of acetic acid until the washwater comes through clear. Combine filtrate and washwater and precipitate with slight excess of lead acetate. Filter and wash. Remove lead with  $H^2S$ , and evaporate nearly to dryness on water bath; extract with alcohol, and slowly evaporate filtrate to dryness. Extract the residue with water and evaporate to a few cc. To this solution add solid  $NaHCO_3$  and the morphia will crystallize out and can be collected and weighed. The solubility of morphia is known, and allowance must be made from the amount of water for what remains behind in solution. Out of eight experiments in which he added morphia to blood and then determined it by this method, he recovered as a mean 95.28 per cent.;

93.34 and 97.32 being the extremes. To determine whether morphia was destroyed by the liver, Tauber maintained artificial circulation with difibrinated pig's blood through a liver of a pig—all the usual precautions necessary for this experiment being taken. He added morphia to the circulating blood, and after  $2\frac{1}{2}$  hours, the blood having made the circuit 19 times, he was able to recover 91 per cent. In another experiment lasting 2 hours and 50 minutes, in which time the blood made 23 rounds of the liver circulation, he recovered 89 per cent. These figures, considering the errors of analysis, show that little, if any, of the morphia was broken up in the liver.

Experiments on the kidney, conducted in the same manner, gave 93.6 per cent. and 94.1 per cent. as the amount regained, showing that the kidney has little or no selective affinity, and consequent secretory power, for morphia.

From blood containing morphia, through which a constant stream of air was being blown, he was able to recover 96.7 and 96.8 per cent. of the amount of morphia he put in, showing that practically none was lost by oxidation.

In an experiment on a dog lasting ten days, in which time 1.632 grammes (24.48 grains) were given to the animal, an analysis of the *fæces* showed that 41.3 per cent. had been eliminated that way.

[The effect of the work of Alt and Tauber will be to revolutionize our ideas about the fate of morphia, as we shall certainly have to regard the stomach and intestines as the channel by which it is excreted and eliminated, and, as Tauber points out, in medico-legal cases, where poisoning by morphia is suspected, the *fæces*, not the urine, is the material which will have to be analyzed; and in post-mortem cases, the stomach and intestines will be the place to search for morphia, even though it had been administered hypodermically. Alt points out a very interesting fact in his paper which Tauber did not quote, viz.: In dogs which had received a large dose of morphia, the symptoms of morphia poison could be held very much in abeyance by washing out the stomach from time to time through an œsophageal tube. This, as a practical point in opium poisoning, should not be overlooked, and Alt has shown that he has saved the lives of one set of dogs on which he practiced this lavage, while another set which had received relatively the same dose of morphia, but were left to themselves, died. An exceedingly interesting point in connection with this is, that stomach-lavage was just as effectual where the morphia was given by the rectum as when it was given hypodermically. This furnishes additional food for thought, and it is not improbable that, pushing along this line of inquiry, we may gain valuable information as to the mode of action of morphia on the stomach and intestines.—K.]

## NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.

ALL AROUND THE YEAR. 1891. A New Calendar by Lee & Shepard, Boston.

Of all the beautiful publications of this well-known firm, none is more artistic than the Calendar for 1891. It is designed by J. Pauline Sunter, and printed in sepia tint and color.

THE SCIENCE AND ART OF OBSTETRICS. By Theophilus Parvin, M.D., LL.D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, etc. Second edition, revised and enlarged. Illustrated with 239 wood-cuts and a colored plate. O. s. Philadelphia: Lea, Brothers & Co., 1890. Pp. 704.

In this edition we find the same excellence in matter and typography which characterized the first. Such additions and alterations have been made as were necessary to cause the work to represent the subject of obstetrics in its present state of advancement. The book is one which will be useful to the profession and medical students alike.

DEVELOPMENT OF THE CRYSTALLINE LENS. By Dr. Richmond Lennox. O. pph. Reprint from Brooklyn Medical Journal. 1889.

THERMAL SPRING (SPRING No. III.) OF SODEN, IN THE TAUNUS. Chemical Analysis by Prof. R. Fresenius. Bacteriological Examination by Dist. Physician Grandhomme. Medical Communications by Sanitary Councillor Koehler, M.D. O. pph. Soden Mineral Springs Co., New York.

WHAT IS THE RATE OF MORTALITY FROM MALIGNANT NEOPLASMATA AS COMPARED WITH OTHER DISEASES? By Alfred Ludlow Carroll, M.D. O. pph. Reprint from Trans. N. Y. State Medical Association. 1889.

I. EXPLORATORY LAPAROTOMY. II. THE ANIMAL SUTURE: Its Place in Surgery. III. THE CURE OF HÆMORRHOIDS BY EXCISION AND CLOSURE WITH THE BURIED ANIMAL SUTURE. 3 pphs. By Henry O. Marcy, M.D., of Boston. 1889-90.

I. A STUDY OF THE SOCIAL STATISTICS OF 4,663 CASES OF ALCOHOLIC INEBRIETY. II. PATHOLOGICAL CHANGES IN CHRONIC ALCOHOLISM. III. THE CONTROL AND CARE OF PAUPER INEBRIATES OF TOWNS AND CITIES. IV. AN ADDRESS delivered at a Meeting of the Am. Association for the Study and Cure of Inebriety, held at Burlington, N. J., to celebrate the 71st Birthday of Dr. Joseph Parrish, President and Founder of the Association. 4 pphs., O. By Lewis D. Mason, M.D., Consulting Physician to Inebriates' Home, Fort Hamilton, L. I.

THE CHEMICAL PHILOSOPHY IN REMEDY. By Dr. Hugh Hamilton, of Harrisburg, Pa. O. pph. Pp. 6. From Transactions of 9th Int. Med. Congress (Washington, D. C.), Vol. III.



- THE RELATION OF THE ABDOMINAL SURGEON TO THE OBSTETRICIAN AND GYNÆCOLOGIST. By A. Van der Veer, M.D., of Albany, N Y. O. pph. Pp. 8. Reprint from Gaillard's Med. Journal. New York, 1888.
- THE TREATMENT OF TORTICOLLIS. By Charles F. Stillman, M.D. (Chicago). O. pph. Pp. 4. Reprint from the N. A. Practitioner. 1890.
- A RATIONAL BRACE FOR THE TREATMENT OF CARIÆ OF THE VERTEBRÆ (Pott's Disease). By the same author. D. pph. Pp. 9. Illustrated. Reprint from Northwestern Med. Journal. 1890.
- A PRACTICAL SPLINT FOR INFLAMMATORY CONDITIONS OF JOINTS. By the same author. O. pph. Pp. 8. Illustrated. Reprint from American Lancet. 1890.
- REFORMATION OF THE PRACTICE OF MEDICINE BY THE DOSIMETRIC METHOD OF PRACTICE: Or the Method of Small Doses of the Active Principles of Plants mathematically measured and scientifically adapted to the Varied Abnormal Conditions. With biographical sketch of Dr. Ad. Burggraave, with portrait. By J. E. MacNeil, M.D. O. pph. Reprint from Dosimetric Review. 1889.
- DOSIMETRY IN COLORADO. By the same author. O. pph. New York, 1890.
- PROCEEDINGS OF THE NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH, at the 7th Annual Meeting, held at Nashville, Tenn., May 19th-20th, 1890. Published for the State Board of Health of Pennsylvania. O. pph. Pp. 72. Columbus, O., 1890.
- BROOKLYN EYE AND EAR HOSPITAL. 20th and 21st Annual Reports. 2 vols. O. pph. Brooklyn, 1889-90.
- N. Y. HOSPITAL AND BLOOMINGDALE ASYLUM. The 119th Annual Report. O. pph. Pp. 54. New York, 1890.
- N. Y. ORTHOPÆDIC DISPENSARY AND HOSPITAL. 22d Annual Report. O. pph. Pp. 35. New York, 1890.
- REPORT OF THE COMMITTEE ON DISINFECTANTS, presented at the 14th Annual Meeting of the American Public Health Association, held at Toronto, Canada, 1886. O. pph. Pp. 33. Concord, N. H. 1887.
- THE BROOKLYN HEALTH EXHIBITION. O. pph. Pp. 29. Reprint from Sanitarian, March, 1890.
- REPORT AND RECOMMENDATIONS CONCERNING SANITARY AND QUARANTINE REGULATIONS IN COMMERCE WITH AMERICAN REPUBLICS. International American Conference. O. pph. Washington, 1890.
- I. RELATION OF DUSTY OCCUPATIONS TO PULMONARY PHTHISIS. II. PRESENT ASPECT OF THE QUESTION AS TO THE ETIOLOGY OF PNEUMONIA. III. MORE RECENT TREATMENT OF PULMONARY PHTHISIS. By William B. Canfield, M.D. O. pph. Reprint from Transactions of the Med.-Chir. Faculty of Maryland, 1889.

- SOME COMPLICATIONS OF CHRONIC ENDARTERITIS. By William Buckingham Canfield, M.D. O. pph. Reprint from *Med. Record*, Baltimore, 1889.
- TWO CASES OF RESECTION OF THE CECUM FOR CARCINOMA, with Remarks on Intestinal Anastomosis in the Ileo-cæcal Region. By N. Senn, M.D. Reprint from *Jour. A. M. A.* Chicago, 1890.
- NEW METHODS OF PERFORMING PYLORECTOMY. O. pph. Reprint from *St. Louis Courier of Medicine*. St. Louis, 1890.
- INTESTINAL ANASTOMOTIC OPERATIONS WITH SEGMENTED RUBBER RINGS, with some Practical Suggestions as to their Use in other Surgical Operations. By A. V. L. Brokaw, M.D. O. pph. Reprint from the *Trans. of the Southern Surg. and Gynæcological Association*. 1889.
- CONSERVATISM IN NASAL SURGERY. By Chas. M. Shields, M.D. O. pph. Reprint from *Practice*. Richmond, 1890.
- THE BLUNT CURETTE IN UTERINE HÆMORRHAGE. By Thos. W. Kay, M.D. D. pph. Reprint from *N. Y. Med. Journal*. New York, 1889.
- STRICTURE OF THE RECTUM; INTESTINAL OBSTRUCTION; INGUINAL COLOTOMY. By Chas. Kelsey, M.D. D. pph. Reprint from *Medical News*. Philadelphia, 1890.
- THE ART OF COOKING. By Edward Atkinson, LL.D. Reprint from *Popular Science Monthly*. New York, 1889.
- PREFERABLE CLIMATE FOR CONSUMPTION; or the Comparative Importance of Different Climatic Attributes in the Arrest of Chronic Pulmonary Disease. By Charles Denison, M.D. O. pph. Denver, 1887.
- I. PARANEPHRITIC CYSTS. II. SPINAL SURGERY: A Report of Eight Cases. III. A RARE FORM OF INTESTINAL STRANGULATION BY A BAND. By Robert Abbe, M.D. 3 pphs. O. Reprints from *N. Y. Med. Journal*. New York, 1890.
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## MISCELLANEOUS.

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JOHN, BAPTIST VAN HELMONT.

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BY JOSEPH H. HUNT, M. D.

The collected works of this man, an illustration of the title-page of which is to be found in the March number of the JOURNAL contain many curious things.

Being a collection of *all* his works, written during a long and busy life, we find many things which the illustrious man probably lived to see the fallacy of.

On spontaneous generation we quote him as follows :

“The smells which arise from the bottom of morasses produce frogs, slugs, leeches, grasses and other things.”

But the most extraordinary of all was the true receipt given by Van Helmont for producing a pot of mice:

It suffices to press a dirty shirt into the orifice of a vessel containing a little corn. After about twenty-one days, the ferment proceeding from the dirty shirt modified by the odor from the corn effects the transmutation of the wheat into mice. Van Helmont, who asserted that he had witnessed the fact, added with assurance :

“The mice are born full grown ; there are both males and females. To reproduce the species it suffices to pair them.”

“Scoop out a hole,” said he again, “in a brick, put into it some sweet basil, crushed by a second brick upon the first so that the hole may be perfectly covered. Expose the bricks to the sun, and at the end of a few days the smell of the sweet basil, acting as a ferment, will change the herb into real scorpions.”

He says (in his treatise *di Vitæ Eterna*, p. 590): I have seen and I have touched the Philosopher's Stone more than once ; the color of it was like saffron in powder, but heavy and shining like powdered glass ; I had once given me the fourth part of a grain. I made a projection with this fourth part of a grain, wrapped in paper upon 8 oz. of quicksilver heated in a crucible, and immediately all the quicksilver having made a little noise, stopped and congealed into a yellow mass. Having melted it with a strong fire, I found within 11 grs. of 8 oz. of most pure gold, so that a grain of this powder would have transmuted into very good gold 19.156 grs. of quicksilver. (Van Helmont's grains were 1-600 part of an ounce).

Let us read his own account of himself, as he relates it in the two introductory chapters of his works ; you will find it not only entertaining, but also instructive, in that it gives us in his own language the story of the beginning of the great revolution in the practice of medicine from the old Galenical doctrines to the modern chemico-medical pharmacopœia.

“ In the year 1580 (says he), a most miserable one to the low countries, my father died. I, the youngest and least esteemed of all my brothers and sisters, was but a scholar ; and in the year 1594, which was to me the 17th, had finished the course of philosophy. Upon seeing none admitted to examination at Louvain, but in a gown, and masked with a hood, as though the garment did promise learning, I began to perceive that the taking of degrees in arts was a piece of mere mockery ; and wondered at the simplicity of young men in fancying that they had learned anything from their doting professors.

“ I entered therefore into a serious and honest examination of myself, that I might know by my own judgment how much I was a philosopher, and whether I was really acquiring truth and knowledge ; but found myself altogether destitute save that I had learned to wrangle artificially.

“ Then came I first to perceive, that I knew nothing, or at least that which was not worth knowing.

“ Natural philosophy seemed to promise something of knowledge, to which therefore I joined the study of astronomy.

“ I applied myself also to logic and the mathematics, by way of recreation when I was wearied with other studies ; and made myself a master of Euclid’s Elements, as I did also of Copernicus’s theory ‘ *De revolutionibus orbium celestium,*’ but all these these things were of no account with me, because they contained little truth and certainty, little but a parade of science falsely so called. Finding after all, therefore, that nothing was sound, nothing true, I refused the title of Master of Arts, though I had finished my course ; unwilling that professors should play the fool with me, in declaring me a master of the seven arts, when I was conscious to myself that I knew nothing.

“ A wealthy canonry was promised me then, so that I might if I pleased turn myself to divinity ; but St. Bernard affrighted me from it saying, that ‘ I should eat the sins of the people.’ I begged, therefore, of the Lord Jesus, that he would vouchsafe to call me to that profession in which I might please him most. The Jesuits began at that time to teach philosophy at Louvain, and one of the professors expounded the disquisitions and secrets of magic. Both these lectures I greedily received ; but instead of grain I reaped only stubble and fantastic conceits void of sense.

“In the mean time lest an hour should pass without some benefit ; I run through some writings of the stoics, those of Seneca, and especially of Epictetus, who pleased me exceedingly. I seemed in moral philosophy to have found the quintessence of truth, and did verily believe that through stoicism I advanced in Christian perfection ; but I discovered afterward in a dream that stoicism was an empty and swollen bubble, and that by this study, under the head of moderation, I became indeed most self-sufficient and haughty.

“Lastly I turned over Mathiolus and Dioscorides ; thinking with myself nothing equally necessary for mortal man to know and admire, as the wisdom and goodness of God in vegetables ; to the end that he might not only crop the fruit for food, but also minister of the same to his other necessities.

“My curiosity being now raised upon this branch of study, I inquired whether there were any book which delivered the maxims and rules of medicine ; for I then supposed that medicine was not altogether a mere gift, but might be taught, and delivered by discipline, like other arts and sciences ; at least I thought, if medicine was a good gift coming down from the Father of lights, that it might have as a human science, its theorems and authors, into whom, as into Bazaliel and Aholiab the spirit of the Lord had infused the knowledge of all diseases and their causes, and also the knowledge of the properties of things. I inquired, I say, whether no writer had described the qualities, properties, applications and proportions of vegetables, from the hyssop even to the cedar of Libanus ?

“A certain professor of medicine answered me, that none of these things were to be looked for either in Galen or Avicen. I was very ready to believe this, from the many fruitless searches I had made in books for truth and knowledge before ; however, following my natural bent, which lay for the study of nature, I read the institutions of Fuchsius and Fernelius, in whom I knew I had surveyed the whole science of medicine as it were in an epitome. Is this, said I, smiling to myself, the knowledge of healing ? Is the whole history of natural properties thus shut up in elementary qualities ?

“Therefore, I read the works of Galen twice ; of Hippocrates once, whose aphorisms I almost got by heart ; all Avicen, as well as the Greeks, Arabians and moderns, to the tune of 600 authors.

“I read them seriously and attentively through, and took down as I went along, whatever seemed curious and worthy of attention ; when at length reading over my common-place book, I was grieved at the pains I had bestowed and the years I had spent in throwing together such a mass of stuff.

“ Therefore I straightway left off all books whatever, all formal discourses, and empty promises of the schools ; firmly believing every good and perfect gift to come down from the Father of lights, more particularly that of medicine.

“ After ten years travel and studies from my degree in the art of medicine taken at Louvain, being then married, I withdrew myself in 1609 to Vilvord, that being the less troubled by applications, I might proceed diligently in viewing the kingdom of vegetables, animals and minerals.

“ I employed myself some years in chemical operations.

“ I searched into the works of Paracelsus ; and at first admired and honored the man, but at last was convinced that nothing but difficulty, obscurity and error was to be found in him, thus tired out with search after search, and concluding the art of medicine to be all deceit and uncertainty.

“ Forthwith, therefore, for thirty whole years after, and their nights following in order, I labored always to my cost, and often in danger of my life, that I might obtain the knowledge of vegetables and minerals, and of their nature and properties also.

“ Meanwhile I exercised myself in prayer, in reading, in a narrow search of things, in sifting my errors, and in writing down what I daily experienced. At length I knew with Solomon, that I had for the most part hitherto perplexed my spirit in vain ; and I said, vain is the knowledge of all things under the sun, vain are the searchings of the curious. Whom the Lord Jesus shall call unto wisdom, he and no other shall come ; yea, he that hath come to the top, shall as yet be able to do very little, unless the bountiful favor of the Lord shall shine upon him.

“ Lo, thus have I waxed ripe of age, being become a man ; and now also an old man, unprofitable and unacceptable to God, to whom be all honor.” (Hutchinson’s Biog. Med., vol. I.)



BROOKLYN VITAL STATISTICS FOR DECEMBER, 1890.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population.....	853,945	The number of Births reported was .....	1338
In the month of Dec. there were 1684 Deaths, the rate of mortality being 23.21 per 1000 of population.		The number of Marriages reported was .....	535
		The number of Still-births reported was .....	139

The mortality by classes and by certain of the more important diseases was as follows:

*Causes:*

1. Zymotic.....	291	Malarial Diseases.....	15
2. Constitutional.....	281	Diarrhoeal Diseases (all ages).....	9
3. Local.....	927	"    "    (under 5 years).....	7
4. Developmental.....	142	Phthisis.....	178
5. Violence.....	43	Bronchitis.....	114
Measles.....	17	Pneumonia.....	267
Croup.....	49	All Respiratory.....	407
Diphtheria.....	75	Bright's Disease.....	35
Scarlet Fever.....	54	Puerperal Diseases.....	24
Typhoid Fever.....	20	Old Age.....	33
Whooping-Cough.....	20	Suicide.....	8
Cerebro-Spinal Meningitis.....	5		

*Reported Cases:*

Diphtheria.....	270	Measles.....	160
Scarlet Fever.....	245	Typhoid Fever.....	80

Deaths by sex, color and social condition were as follows:

Male.....	879	Native.....	1166
Female.....	805	Foreign.....	418
White.....	1662	Married.....	494
Colored.....	22	Single.....	966
Widows, Widowers, and not stated.....	224		

Still-births, excluded from list of deaths, were as follows:

Males.....	69	} Total.....	139
Females.....	70		
Deaths in public institutions.....	119	Homicide.....	0
Deaths in tenement houses.....	462	Suicides.....	8
Inquest cases.....	139		

*Age Periods:*

Deaths under 1 year.....	318	Total deaths, 5 to 20.....	150
"    "    5 years.....	313	"    "    20 to 40.....	308
Total deaths under 5 years.....	631	"    "    40 to 60.....	287
		"    "    60 and upwards.....	308

Certain foreign and American cities show the following death-rate for the month of December:

Brooklyn.....	23.21	Vienna.....	21.25
New York.....	22.17	Paris.....	21.88
Philadelphia.....	19.48	London.....	19.95
Berlin.....	19.10	Glasgow.....	23.50
Dublin.....			24.95

## BROOKLYN VITAL STATISTICS FOR YEAR 1890.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population, Nov., 1890.....	853,945	The number of births reported was	15,000
During the year 1890 there were	19,827	The number of marriages reported	was.....
deaths, the rate of mortality being	23.22 per 1000 of population.	The number of still-births reported	was.....
			1,369

The mortality by classes and by certain of the more important diseases was as follows:

*Causes:*

1. Zymotic.....	4,360	Malarial Diseases.....	168
2. Constitutional.....	3,725	Diarrhoeal Diseases (all ages)....	1,668
3. Local.....	9,693	“ “ (under 5 years).....	1,482
4. Developmental.....	1,479	Phthisis.....	2,169
5. Violence.....	570	Bronchitis.....	1,010
Measles.....	111	Pneumonia.....	2,325
Croup.....	381	All Respiratory.....	3,686
Diphtheria.....	902	Bright's Disease.....	424
Scarlet Fever.....	227	Puerperal Diseases.....	168
Typhoid Fever.....	182	Old Age.....	397
Whooping-Cough.....	233	Suicide.....	94

*Reported Cases (incomplete):*

Diphtheria.....	2,185	Measles.....	1,821
Scarlet Fever.....	1,657	Typhoid Fever.....	360

Deaths by sex, color, and social condition, were as follows:

Male.....	10,407	Foreign.....	6,045
Female.....	9,420	Married.....	5,368
White.....	1,746	Single.....	11,844
Colored.....	41	Widows, Widowers, and not stated	2,615

Still-births, excluded from list of deaths, were as follows:

Males.....	850	} Total.....	1,369
Females.....	519		
Deaths in public institutions.....	1,562	Homicides.....	14
Deaths in tenement houses.....	6,437	Suicides.....	94

Inquest cases, exclusive of still-births.....1,630  
 “ “ inclusive of still-births.....

*Age Periods:*

Deaths under 1 year.....	5,299	Total deaths, 5 to 20.....	1,492
“ from 1 to 5 years.....	3,163	“ “ 20 to 40.....	3,454
Total deaths under 5.....	8,462	“ “ 40 to 60.....	3,275
		“ “ 60 and upwards.....	3,144

Certain foreign and American cities show the following death-rates for the year 1890:

Brooklyn.....	23.22	Vienna.....	24.82
New York.....	25.20	Paris.....	24.94
Philadelphia.....	21.16	London.....	20.01
Berlin.....	24.12	Glasgow.....	25.40
Dublin.....	26.24		





AMBROSIUS PAREUS.

This portrait of "Our Good Father Ambrose" is a leaf from that grand old work "Academia des Sciences et des Arts," a folio in twelve volumes printed by Daniel Elzivir in Amsterdam in 1682. It contained about 300 portraits of "illustrious philosophers, mathematicians, astrologers and medicens."

This famous surgeon was born in France in 1609 or 1610. He died at the age of 81 in Paris, December 20, 1690.

His parents were humble and poor; consequently his early education was neglected. He studied Latin, however, with a priest, and in return cultivated the garden and groomed the mule of his reverend master.

Pare was early apprenticed to a barber-surgeon, who taught him the rudiments of minor surgery; but his ambition to know more being aroused, he resolved to go to Paris and perfect himself in the art of chirurgy as then known. We know that in that period the barber-surgeons monopolized all the knowledge of this subject and were the sole exponents of the art.

For three years Pare pursued his studies in the Hotel Dieu, that still famous hospital. When 27 years of age he received the appointment of military surgeon, and served in this capacity for a third of a century. From this humble beginning his rise was rapid. He became a member of the fraternity of master surgeons, and subsequently was their Provost.

In 1552 he was appointed surgeon to Henry II., and thenceforth "the kings of France transmitted him to their successors as a legacy of the crown," holding the same position successively to Francis II., Charles IX. and Henry III. These monarchs were all warmly attached to him, and he was at once their privy councillor and their professional adviser; he followed them in their campaigns and attended them in their retirement. It is said that during the massacre of St. Bartholomew the king shut him up in his own room, saying, "It is not right for a man so useful to the world to perish in such a manner." Pare was a Huguenot.

It was this "father of French surgery" who introduced to operative surgery the application of the ligature to cut and wounded blood-vessels.

If this "grand imperial surgeon of the sixteenth century" had done nothing else, he would have been immortalized by us; but he introduced many other new methods into the art, such as podalic version in difficult labors; he was the first to employ the twisted suture in operations for hare-lip; first to extract loose cartilages from the knee-joint, and first to reduce dislocation of the shoulder with the heel in the axilla.

His works abound in ingenious devices, some of which have been claimed to be of recent invention. For example: Heys saw, Symes club-foot boot; fine models of artificial hands, legs, noses and ears; figures of drainage-tubes, etc.

He was a voluminous writer. His collected works make a ponderous folio of over one thousand pages. The first edition was published in Paris in 1575, the engravings in which cost him three thousand livres.

Our limited space prevents us saying more about this "earnest, devout old Huguenot, who ever ascribed all glory, power and praise to our Heavenly Father, claiming that he dressed the wounds only, and that God cured them." But I have taken too much of your time, and will pass on to

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*ORIGINAL ARTICLES.*

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THE PROMISE OF MEDICAL RESEARCH.

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BY ALEXANDER HUTCHINS, M.D.

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IN RESPONSE TO "THE MEDICAL PROFESSION," AT THE DINNER OF THE  
BROOKLYN THROAT HOSPITAL, FEBRUARY 25, 1891.

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If the future is to be judged by the past, the sudden broadening of medical research within the past half century, with the higher and wider views that medicine shares with and learns from all other sciences, is too bewildering to permit any safe estimate of what the future has in store. Were Galen and Sydenham and Benjamin Rush to appear in this year of grace, they would find themselves but children tossing pebbles on the shore of a vast sea whose every wave is familiar to hosts of later mariners; just as Galvani and Franklin would be dazzled by the illumination of this hall. He would be a busy man whose sole endeavor was to keep abreast with the bare results of the myriad workers of to-day, and he would fail in the attempt.

It is difficult to understand that state of knowledge which permitted the workers of the past to stand out so prominently in their time, not as we read of them, representatives of a class, but as they lived, removed from their fellow-men, originators of ideas, with no competitors. It is almost as difficult to comprehend the prominence of men within our own remembrance. Parrish and Mott and Simpson stood as beacon lights. There is a host of men to-day equally effective and brilliant. My cherished friend Dr.

Hutchison, the man with a cunning hand guided by a sensitive conscience, did for many years the major surgery of this town. To-day there is among us a score of men who have done things that he never did and who are equipped with all the later refinements and resources of surgical technique.

The specialties, one of which this symposium represents, are the logical outcome of this marvelous uprising. The family doctor of the olden time is sepultured in his historic niche, and the general practitioner, who must ever remain the representative of the healing art, occupies a new place in the changed activities of the time. In some of the technical schools is kept in script an ever-increasing list of new terms which no lexicon has collated and which the student must master before he can do intelligent work. The "Century Dictionary," but three-fourths published, is wanting in many words of common speech among special workers, and which have come into use since that thesaurus was begun—not born of pedantry, but useful words representing ideas in the growing analysis of scientific work. While all the technical speech of science is jargon to the unlettered, analytical labor is so diverse that the terminology of one class of specialists is an obscure tongue to each other class.

The babe from the kindergarten lips out propositions in literature, science and history that astound his progenitor; the requirements for admission to some of our colleges are about on a level with the former conditions of a bachelor's degree; the young doctor starts out with his parchment, which is a patent for an amount of medical information, knowledge of technique and clinical experience of which his fathers had scarce a hint. There are a scattered few who delve into pure reason and pure science, but the great trend of research in this bread-and-butter civilization is utilitarian. Means are wrought to compass ends. Medical research is no exception to the prevalent rule. As physical health and the prolongation of life become more important and necessary parts of the machinery of progress, the alertness of medical research measures itself alongside of the problem of preserving and prolonging. Human life has become more sacred as individuals have come to represent great interests, and as Christianity has uplifted the nations into mutual comity; for Christianity and commerce are an inseparable alliteration. The great discoveries and adaptations of remedial appliance have been coincident with the increasing estimate of preserving men, to keep unbroken the continuity of intelligent labor by prolonging the activities of the individual laborers. It may appear a bold statement, but certainly it is worth a thought

before denial, that what are called the triumphs of medicine came less as an historic surprise than as a quiet response to the emergencies that demanded them. The equipment of the modern medical man would have rusted amid the moist vapors that befuddled the heads of the lords and ladies of the courts of the Louis, as it would be rubbish among the Stanley-wrecked villages of the naked Africans. To plunge the stump of an amputated limb into boiling oil to arrest the hæmorrhage would drive the iciest surgeon into frenzy; and yet Mr. Ellis has shown how obtuse to external influences, physical and moral, is the undeveloped nervous sensibility of the unintellectual and criminal classes. Every ward in every hospital gives proof that ignorance and poverty are deficient in that nervous exaltation which is the product of intense conflict in affairs. Few shoulders of to-day could endure the quarter-staff of Robin Hood and Friar Tuck. Our fellow-townsmen, Mr. Dempsey, would forfeit the stakes sooner than take the punishment. The ligature and anæsthesia, the laryngoscope and antiseptics, came when they were called for. We fight at long range. Soon arbitration will consign the armed cruiser and the Krupp guns to the junk-shop. Medical art is ministering to a brainy race in a brainy civilization. Our emotions and our nerves are on the surface, and anæsthesia came on call.

Thus it happens that medical men are surprised at nothing. When the distinguished Frenchman proposed to course through the veins of the roué and the neurasthenic the expressed juice of the most sensitive part of the organism of the gentle lamb, the world had no set-back, and the elixir of life furnished small talk for maid and matron on the watering-place divan. "Come and tell us all about the elixir of life," chorused a bevy of white-robed girls to a Brooklyn doctor, at a White Mountain resort last summer. Although Job had a revelation of worms many centuries ago, the distinguished Teuton, in national rivalry, recalling the antagonisms of Alsace and Lorraine, proposes an extract of dead bacilli that shall check tuberculous decay. "The paths of progress are strewn with blunders, and so only is the right way learned." If Koch and Brown-Séguard triumph, they shall be niched with Jenner. If they fail, it will be but the assertion of Nature that the original or inherited results of questionable morals and mal-nutrition will brook no delay in their downward course.

Medical men are surprised at nothing—not even at the inconsistency or impertinence of their critics. "Medicine is not a science. How can its disjointed facts, its illogical inferences, its uncertain results of treatment, rank it among the sciences?" And

yet so far from there being any decline of interest or any decline of confidence, "even in this cool, critical, unsuperstitious, evidence-weighting nineteenth century," when a man is sick he sends for his doctor, and there is, occasionally, impatience at his tardy arrival. "Why," it is asked, "do not the boastful pretentious make good their claim by stamping out the zymotics, and by driving from the earth the hideous orgies of scarlet fever, diphtheria and typhoid?" Will that question be calmly, or even seemingly, asked in the face of the recession of cholera and yellow fever from our fair land through medical information made effective by statute in Health Board and Quarantine? Public sentiment has got along so far as to put a restrictive tariff on the importation of foreign evils; but many decades of education must elapse before civil society will so reconstruct itself as to do away with the conditions that originate pestilence within our own habitations. The forces of reconstruction are at work in a thousand ways, and this occasion marks one of them, when the more favored are lending a hand to help the weaker brother. But until the ill-nurtured, ill-fed, ill-housed, ill-cultured, ill-paid are brought into the possibilities of decency, and enjoyment and improvement—if we were clothed with plenary power, with the mace of the speaker to enforce authority, the best that medical art can do is to keep the pestilence within bounds; and the prudent course for its critics is to be thankful, *very* thankful, that it can do so much for them when their own homes are invaded by the scourge. The Roman emperors of the early Christian era have come down to us with a well-accredited reputation for tickling their appetites with pheasants brains in private, and wholesale slaughter of their fellow-men in public. But they kept their sportsmen and their victims healthy by cloacæ and baths unequalled by any city in capacity and number, and their amphitheatres permitted eighty thousand at one time to see Christians torn to pieces by wild beasts in the arena. They kept the city and the citizen clean, and provided amusement for the populace. No city of our boasted civilization has ever done either. I do not happen to know the name of Caligula's medical adviser; but he was level-headed—a characteristic common to his successors; still he had an easy task, having only one man to instruct and that man a despot. In this country alone we have sixty millions to convert—each a possible voter and a medical crank, and only one medical adviser to each five hundred of the population.

Still we have every reason to be thankful and no reason to despair. The trend and drift are to the physical uplifting of the



people through the educational process. The health primer is to be the fulminating bomb that is to crash through the walled home of pestilence and in its explosion leave not one stone upon another. It may be absorbed in the kindergarten; it may be found by Diogenes as he gropes with his lantern; it may be reduced to pulp, and, as a bolus, rammed down the throats of the great unwashed, but it is the missile of destruction to filth and its vile brood. The thousands of licentiates from our medical colleges are to become many thousands more. Natural selection will prevail. They who are to profit the community will work in their chosen calling. The rest will, by reason of their special culture, become teachers by example and precept in less formal relation to their fellows. Instruction in hygiene, in academy and university, is to grow from more to more. The literature relating to the human body, already very extensive, is to become the *vade mecum* of the people. Diversified benevolence, that seems illimitable in its efforts to help the poor and sick, is to become all powerful in rescue of the unfortunate. The successors of such capital as is despoiling the manliness of labor and forcing it into dirt, destitution and disease will themselves be first "to soothe the knotted brow of anguish" and lift the humble brother to a fair level with their own comfort. Within the half century the restrictions of sanitary science, embodied in statutes, have increased the productive and useful years by an average of three, thereby adding a notable increase to the aggregate of productive industry. Increase of productive industry is the condition of greater physical comfort, and an elevation of intellectual and moral life. The cultivated instinct of self-preservation is the ground of assurance that the health of the people shall ultimately be under the ample guardianship of the State, in the abolition of nuisance, in the protection of childhood, in the control of impurity and excess, in provision for decency in home and vicinage, in restriction in oppression in labor and inadequacy of pay, in the supply of healthful food and opportunity for amusement and profit. The education of the people shall formulate itself in laws that shall protect and save.

"The common sense of most shall hold a fretful realm in awe,  
And the kindly earth shall silence lapped in universal law."

The enthusiasm and zeal that a man has in his work must always hold relation to the permanence and growth of his work, so that by his own effort he may contribute to its usefulness and strength. The medical man yields to none in his sense of the

high dignity of his calling. They who profit the community and thereby show their fitness for the work may well claim the benison of Coleridge's beatitude: "Blessed is the man who has found his work!" It is not personal belief only, but the testimony of results that, as his brother's keeper, the medical man in Brooklyn, at the antipodes, through all the earth, in all time, according to his lights, has done faithfully, conscientiously, skilfully, bravely, fruitfully, his duty "in that state of life in which it has pleased God to call him."

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### INTERESTING CASES OF PLEURISY.

BY R. VAN SANTVOORD, M.D., NEW YORK.

Read before the Harlem Medical Association.

FIRST GROUP, FIRST CASE.—An Italian, aged about forty years, entered the Randall's Island Hospital two years ago last May suffering from pleurisy with effusion, for which he was tapped, leaving the hospital in eighteen days.

Last July he was again admitted, suffering from vomiting, tenderness over the epigastrium and slight elevation of temperature, and giving a history of alcoholism. As the vomiting persisted, tenderness became more diffuse and a friction sound over the liver was heard, it became evident that he was suffering from a subacute form of peritonitis. From its subacute character and the previous occurrence of a pleurisy, over the site of which dullness, crepitation and absence of respiratory murmur still existed, the case was regarded as tubercular. A laparotomy by Dr. A. P. Dudley disclosed a much-congested peritonæum studded with gray tubercles and so extensive adhesions that no efficient washing out of the peritoneal cavity was possible. The patient died a month later.

*Autopsy.*—Left lung adherent, its lower lobe collapsed. Small, old cheesy focus at right apex. No recent tubercular process in lungs. Extensive recent tuberculosis of peritonæum. Cirrhotic liver. Apparently normal kidneys.

In this case, as in others, although the pleurisy was probably the first recognizable tubercular manifestation, it was probably not the primary focus of the disease. My experience, clinical and pathological, has led me to the belief that the period of latency of tubercular infection may be a long one. The pleurisy and the

peritonitis were both probably local manifestations of an infection which was located primarily in the lymphatic glands. The two years' interval between the two outbreaks is a good illustration of the latency of the disease.

Second case of this group is a young man, twenty-five years of age, whose father died three years ago with phthisis. This patient has had pleurisy with effusion, and has been tapped; he is cachectic, badly developed and flat-chested. The case is of very slow development, and is probably of tubercular origin. Eichhorst states that tuberculosis is most apt to develop in those cases of pleurisy which recede quickly. This is contrary to what is observed in the two cases mentioned.

SECOND GROUP.—The first case was that of a delicate young lady who came under my care with a double pleurisy. Every winter she suffered from bronchitis and asthma. She was said to have a "spot of disease" in one of her lungs, discovered by a previous attendant some time before. The double pleurisy suggested a constitutional affection of some kind, and, with the above history, tuberculosis seemed at first most probable. I was not able, however, to find the alleged spot of disease in the lung, the scanty sputum contained no bacilli, and the case progressed so rapidly and so favorably under tonics, iodine on the chest and syrup of hydriodic acid and caffen natro-benzoate for the bronchitis and asthma, that I gave up that idea. I learned, however, that her mother and one other member of her family were rheumatic, her father had been gouty and asthmatic, and the patient herself had suffered from articular pains, though not of sufficient persistency to be characterized with certainty as rheumatic.

It is a recognized fact that endocarditis may occur as the sole manifestation of specific rheumatic poisoning. The question suggests itself, may not pleurisy do likewise, and was not this such a case? The Germans—Eichhorst, for instance—speak of pleurisy occurring as an isolated disease as "rheumatic," meaning thereby as being produced by cold. I do not know that the question has been raised in the form in which I have above stated it.

The second case of this group was that of a robust young lady, who complained of sharp pain on respiration with pleuritic crepitation over the right middle lobe. As she had some years before consulted me for pain in the knees on kneeling, I regarded the case as probably rheumatic, and prescribed salol, grs. x., every three hours. Prompt relief and cessation of all signs and symptoms occurred in forty-eight hours. Cases of dry pleurisy in otherwise healthy adults I believe often run a very short course without any

active treatment, but in this case the relief seemed too speedy to be only coincidence. The use of salicylates in acute pleurisy has been advocated for some time, as by Dr. J. Drzewiecki (*Medical Record*, August 25, 1888, p. 205). The analogy between the course of acute articular rheumatism and some apparently primary pleurisy is pointed out by that writer, but he does not directly suggest that they may be effects of the same specific poison.

THIRD GROUP, FIRST CASE.—A powerfully built man, who had, twenty years before, suffered from pericarditis, and later from typhoid fever, renal calculus and pneumonia. He had suffered for a long time with slight pain and tenderness in many joints. One evening he had a severe chill, followed by cough, high temperature and crepitation over both lower lobes, without pleuritic pains. Pneumonia was anticipated, but no signs of consolidation developed. The crepitation lasted for several days, and a cough with muco-purulent expectoration lasted for several weeks, he being much run down by overwork. His more acute symptoms subsided in twenty-four hours under phenacetin, followed by aconite and liquor ammoniæ acetatis.

In a second case—that of a feeble man of sixty-seven—high temperature, delirium and crepitation over one lower lobe seemed to justify the diagnosis of commencing pneumonia. Under the same preliminary treatment as in the above case, followed by Warburg extract, his symptoms and signs passed away in two or three days, no evidence of pneumonia developing. He died of apoplexy a week later.

The interest of these cases lies in their interpretation. A number of years ago Prof. E. G. Janeway narrated a case similar to the above to the writer, and raised the question as to whether it was or was not one in which pneumonia had been aborted by treatment. The writer recalls the case of a patient who had previously suffered two attacks of pneumonia, after a chill, fever and pleuritic pain; the acute symptoms subsided for a few hours, but then returned, an unquestionable pneumonia developing.

The writer believes that the crepitant râle is of pleuritic origin. These cases are probably of infectious origin, and the infectious agent may be the pneumococcus, which has been found in cases of pleurisy occurring independent of pneumonia, peri- and endocarditis and in meningitis. They are very possibly abortive types of the constitutional infection which, in its fully-developed form, we know as acute lobar pneumonia. Whether or not treatment has any effect in preventing the full development of the disease I do not know. It is quite possible that it has.

# REPORT OF A CASE OF PISTOL-SHOT WOUND OF THE RIGHT THIGH.

BY GEORGE WACKERHAGEN, M. D.

Read before the Brooklyn Surgical Society, February 5, 1891.

At 12 o'clock on Monday, February 2, 1891, I was called to see a gentleman who had an hour before received a pistol-shot wound in the lower portion of the right thigh. Upon reaching the house, I found the patient suffering considerably from shock, the lower half of the trousers of the right leg saturated with blood, and a hole on the outer side above, and another ragged hole under and to the inner side of the knee of the trousers.

While this garment was being removed, and while supporting the knee-joint with my left hand on the outside of the drawers, I felt the bullet drop against my fingers from the inner side of the knee.

The drawers now having been removed, the bullet was secured and examined. It was stated by one of the attendants that the revolver had been pronounced by the officials at the station-house to be of 38 calibre. From this statement, and from its general appearance, it was evident to me that about one-third ( $\frac{1}{3}$ ) of it had been split off, and I concluded that there was circumstantial evidence sufficient (because of the ragged hole on the inner side of the trousers) to warrant me in believing that the other portion had passed out and been lost. The leg was now antiseptically treated, preparatory to an examination of the wounds.

The patient absolutely refusing to permit the administration of an anæsthetic, I was obliged to work rapidly. The wound of entrance was small, and situated about three and one-half inches above the outer condyle on the outer side of the thigh; the wound of exit larger and ragged, about one inch above and behind the inner condyle. It being impossible to determine anything as to the condition of the bone by the use of probes, I was obliged to enlarge the openings sufficiently so that I could follow the track of the bullet with my finger, which was directed obliquely downward and inward. The outer and under surface of the femur, including the popliteal space, was found roughened, being denuded of its covering.

The wound having been thoroughly irrigated with bichloride solution, 1-2000, a drainage-tube was introduced from one opening to the other, and iodoform and bichloride gauze applied.

The patient is apparently doing well, the temperature not above 99° since the injury.

I did not examine the drawers for a corresponding hole on the inner side, and this morning was informed by one of the attendants that they had been washed, and that no hole could be found excepting the one on the outer side. The patient now volunteered the statement that the trousers were an old pair, which he wore because they were so loose and comfortable, and that he was in the habit of sitting at his desk upon a high revolving stool, and believed the hole had been worn in the trousers by rubbing the inner side of his knee against the rough edge of the seat of the revolving chair.

I now determined to get at the bottom of this part of the mystery, and had the bullet examined by two dealers in firearms, and also by a gunsmith. They all pronounced it to be 38 calibre, and believed that a piece of it was missing. I then procured a 32 and 38 bullet, and found them to weigh respectively 86 and 146 grains, the 32 corresponding exactly in weight with the bullet which had caused the injury.

I then sent to the station-house for information about the revolver which had been used, and was informed that the reported 38 calibre was a mistake, and that the actual size was 32.

The foregoing history shows how one may be led astray in forming an opinion from circumstantial evidence, and how necessary it is to be very careful in all examinations before expressing an opinion about gunshot injuries.



## A STUDY OF TWENTY-EIGHT CASES OF APPENDICITIS.<sup>1</sup>

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

In the year 1849 Mr. Hancock, an English surgeon, called the attention of the profession to the importance of making a free incision into certain abscesses which form in the right iliac fossa, without waiting for fluctuation to demonstrate the formation of pus, in cases of what has since been shown to be ulcerative appendicitis. Mr. Hancock reported his case before the London Medical

<sup>1</sup> A portion of the discussion upon the report of the Surgical Committee of the Medical Society of the County of Kings, November 18, 1890.

Society,<sup>2</sup> and a report in full was published in this country in the same year.<sup>3</sup> The importance of the subject, however, was not thoroughly appreciated, in this country at least (nor does it seem to have attracted the attention it deserved abroad), until, in an article by Dr. Geo. Lewis, of New York,<sup>4</sup> the question as to the propriety of opening up abscesses which have their origin in the vermiform appendix by free incision is discussed, and the operation is spoken of as one worthy of the attention of surgeons. The well-known fatal issue which only too commonly followed the disease under consideration was not sufficiently impressed upon the professional mind, it would seem, for it was not until another decade had elapsed that any particular reference was made to the subject. To an American surgeon, Prof. Willard Parker,<sup>5</sup> of New York, is due the credit of having brought the subject forward again, and in such an impressive manner as to attract attention, both in this country and in Europe. Since the publication of the paper of the last-named surgeon, interest in the disease has steadily increased; but it was not until the publication of the observations of Robert Weir, of New York,<sup>6</sup> upon the various conditions which centred in the right iliac region, all of which were characterized by the occurrence of either the formation of pus, and, when allowed to pursue their natural course, produce death by the latter finding its way into the abdominal cavity, or in which rapidly spreading septic peritonitis carries off the patient quickly in a comparatively early stage of the disease, that a distinct advance was made both in the elucidation of the pathology of the disease as well as in its operative treatment. This surgeon, as the result of an analysis of one hundred autopsies and from thirty-two personal operations upon so-called perityphlitic abscesses, comes to the conclusion that all such abscesses originate in the peritoneal cavity, and that in the vast majority of cases these have their origin in a perforation of an appendix the subject of gangrene, or of a perforation the result of ulceration, or of both.

The well-known exceedingly unfavorable prognosis in cases of appendicitis, when allowed to run their natural course, is of itself sufficient to awaken the interest of surgeons, and I presume every practitioner of large experience has seen one or more cases in which, either from failure to recognize the disease or from a refusal

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<sup>2</sup> London Medical Gazette, N. S., vol. vii., p. 547.

<sup>3</sup> American Journal of the Medical Sciences.

<sup>4</sup> New York Journal of Medicine, 1856, 3d S., vol. i.

<sup>5</sup> Medical Record, New York, March 15, 1867.

<sup>6</sup> Philadelphia Medical News, April 27, 1889.

on the part of the patient or his friends to permit of operative interference, death has occurred from rapidly spreading peritonitis following the escape of pus into the peritoneal cavity. And who can say how many of the cases of so-called "inflammation of the bowels" of former years, and even of the present day, in some districts, would not at a post-mortem examination have shown that appendicitis in one of its forms had been present? I therefore conceive that the subject of early operative interference, either exploratory or otherwise, can never be worn threadbare, and that, convinced as I am of the success which will follow the method of treatment advocated by myself in bringing to a happy termination and change its issue from an almost invariably fatal termination to the reverse, no further apology will be required on my part for occupying your time in presenting some facts in connection with this disease, and some remarks which, although principally statistical, are the result of my experience with this disease.

During the past eighteen years 28 cases of what is now generally termed appendicitis have fallen under my observation. Of these 28 cases, 26 were males and 2 were females. This accords with the very generally accepted fact that this disease occurs more frequently among males than females. I do not know that any reason has ever been offered in explanation of this peculiarity of the disease, nor have I any to offer.

The ages of the patients are of interest, as showing that the disease is more apt to affect childhood and early adult life than infancy and old age. The youngest of my patients was nine and the oldest sixty-five. In my experience, appendicitis is comparatively rare in the aged.

As to the occurrence of slight and non-ulcerative attacks, these constituting a part of the previous history of the cases, there were noted but 2 in which such a history could be obtained. Of these, one had suffered three previous attacks, the first of moderate intensity, and the last two but slight in character; the other had suffered a previous attack of pain and tenderness in the right iliac fossa, which had subsided but partially.

The question of the previous condition of the bowels as regards constipation frequently arises in connection with possibility of this condition constituting a special predisposition to the disease. Of my 28 cases, 16 suffered from constipation habitually, and particularly just prior to the onset of the disease, while 4 developed diarrhoea before the attack; in 8 cases neither condition could be said to be present.



The ushering in of the disease by nausea and vomiting occurred in 18 cases; there was slight or no gastric disturbance in 10. In the majority of instances there was no well-marked rigor at the very commencement. The only 4 cases in which this was a prominent symptom were all cases of rapid ulceration and perforation. The occurrence of rigors after forty-eight hours had elapsed is a symptom to which some importance may be attached in this study, inasmuch as it occurred in 22 of the 28 cases. That rigors may not be a necessary part of the disease, even when extensive suppuration occurs, is shown by the fact that 4 of this latter class passed through the entire disease without exhibiting this symptom.

Some importance may be attached to the symptom of elevation of temperature in cases in which there may be some doubt, at the very onset of the disease, as to its character, although, in my experience, the extent of elevation of temperature is no criterion of the gravity of the case. A range of from 100° to 103° F. marked the beginning of all 28 cases. In some instances the higher temperature would gradually subside in the face of the indisputable fact that the case was evidently progressing to decided suppuration. Again, I have seen a sudden fall of temperature occur in a case of perforation after thirty-six hours; in other cases there has been a steady decline of the temperature and lessening of the pulse rate, thus giving the impression that all was going on favorably, when ulceration and perforation were steadily progressing.

In 26 of the 28 cases, pain and tenderness existed throughout the entire abdominal region in the very beginning of the attack. Conjointly with this general pain and tenderness, in 20 of the 26 cases, it was particularly referred, within the first twelve hours of the attack, to the right iliac region, and in 26 of the 28 cases there was decided and marked tenderness in this neighborhood within twenty-four hours of the incipiency of the symptoms. The occurrence of a mild general peritonitis, so called, I have not been able to demonstrate beyond that which the above-mentioned generally distributed pain and tenderness would suggest. In fact, in those cases in which I have had occasion to inspect the peritoneal surfaces, either by means of laparotomy or a post-mortem examination, I have been struck, in the cases in which actual perforation had not occurred, by the freedom of these from changes other than those incident to mere irritation or congestion. I therefore cannot believe that a general peritonitis, even of a very slight grade, is a part of the disease at its very onset. In two cases the tenderness in the right iliac region was elicited when no pain was complained of beyond a general sense of distress. Since attention was called

by McBurney to the existence, early in these cases, of a marked tenderness upon point pressure with the finger-tip at the edge of the right rectus muscle where this crosses a line drawn from the right anterior iliac spine to the umbilicus I have examined with especial reference to this symptom, and found it present in eight out of nine cases. In the ninth case a general peritonitis had begun prior to my visit to the patient, and this masked the prominence of this symptom.

The occurrence of a tumor in the right iliac fossa after the second and before the fifth day was noted in 15 of the 28 cases; its appearance in 8 cases was not demonstrable until after the fifth day. In 5 cases no tumor was noted in the entire course of the disease.

The characteristic retraction of the right thigh—a symptom upon which so much stress has been laid by some writers—I have seen occur only rarely, and then only in those cases in which the post-peritoneal layer of connective tissue had been invaded by extension of the inflammatory process from the para-appendicitic structures.

In the entire 28 cases there was not a single case in which there occurred a spontaneous external evacuation of the abscess. This is significant in view of the fact that there are still practitioners who insist upon the application of poultices to “hasten the matter to the surface,” and who would counsel the postponement of operative interference until fluctuation could be determined.

There were three cases in which pus had made its way out of the peritoneal cavity. In two of these the matter had made its exit from the direction of the posterior layer of the peritonæum alone, making its way into the cellular tissue in this locality and infecting the entire lumbar region. Of these two cases, one recovered after free incision and drainage, while the other perished from profound sepsis before consent was obtained to interfere. In the third case the pus had found its way into the deep structures of the thigh through the crural ring and posteriorly into the lumbar region simultaneously. This case, after a most tedious convalescence, recovered after operation.

Twenty-four of the twenty-eight cases have been operated upon. The operation, in all cases except one, consisted of free incision and drainage. In this case, occurring early in my experience, following the advice of Prof. Parker, an incision was made parallel with Poupart's ligament through the muscular wall of the abdomen and to the transversalis fascia. There being no evidence of adhesions, and the case being one of a mild character, the wound was

simply kept open for a few days; all symptoms subsiding, it was allowed to heal. Although this patient made a good recovery, the indications present in these days of strict asepsis and improved technique, would be considered sufficient for removal of the appendix.

Two of the cases died without operative interference. Of these, one was a case of early perforation in which operation was refused; the other died of a most profound sepsis subsequent to posterior perforation.

Three of the cases recovered without operation. The subsequent history of these cases is as follows: One, a physician of this city, suffered a recurrence of the disease, or, more properly speaking, a prolonged continuance of the attack in which I saw him, at which time I advised operation. Two months later, during my absence from the city, having in the meanwhile been more or less of an invalid and debarred from pursuing his professional work, he suffered an aggravation of the symptoms, and was compelled to submit to operative interference, consisting of simple incision and drainage, at the hands of another surgeon, from which he made a prompt recovery.<sup>7</sup> Another was a case in which three prior attacks had occurred, the patient applying to me during what appeared the incipency of another attack. The case was referred back to the family physician, without whose knowledge the patient had consulted me, and I have not learned of the result. The last was observed during the last few weeks, in consultation with Dr. William A. Little, of this city. The patient made a good recovery, and up to this time remains in good health.

Of the 24 cases in which operative interference was instituted, 22 recovered and 2 died. Of those which resulted fatally, one perished from septic peritonitis present prior to operation, and the other from general sepsis resulting from perforation of the posterior layer of the peritonæum and infiltration of the post-peritoneal cellular tissue.

In none of the cases, either those observed post-mortem or those operated upon, was there found any trace of a foreign body to which the disturbance in the vermiform appendix could be attributed. I have on several occasions met with small portions of inspissated fæcal matter which had been evacuated with the pus or washed out subsequently with the irrigation, or possibly others may have been broken down from having found their way into the

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<sup>7</sup> I am informed, since the above was written, that this patient has suffered a second relapse and is seriously considering the propriety of having his appendix removed.

abscess cavity previously or softened by the irrigation used; but in no instance have I been able to find a foreign body, either enterolith, fruit seed, or any of the foreign bodies which are supposed to be instrumental in bringing about the condition under discussion. It was my good fortune in one instance—that of early perforation—to have had the diagnosis made within the first twenty-four hours by Dr. Cruikshank, the family physician. The patient recovered after laparotomy. In this case the appendix was found to be already perforated and filled with soft fæcal matter, some of which was exuding through two points of ulceration and perforation of the appendix itself. This case was one of the so-called mild type. The temperature was never high, and the patient expressed herself as being surprised when the doctor asked for a consultation, and still more so when she learned that an operation was necessary to save her life. Doubtless this would have passed in former times for a case of the simplest colic; until the occurrence of threatening symptoms or a rapidly fatal issue. There were no adhesions surrounding the vermiform appendix found at the operation, and her death would have been inevitable without the prompt interference which the family physician so wisely advised.

As to the operative indications, in cases in which a tumor is present and where the induration is decided, here there is less fear of perforation and a greater opportunity for a display of the so-called conservative method of treatment than in those cases in which no tumor is present. It goes without saying that if perforation of the vermiform appendix is to occur early as a result of the ulcerative process which may be initiated shortly after the commencement of the disease, there is no opportunity for the formation of a limiting wall of adhesions. If perforation does occur under these circumstances it will prove fatal. I therefore desire to emphasize the fact that those cases in which a tumor is not present must be most carefully watched, and to reiterate that in watching these cases the temperature indications, in my experience, have been of comparatively little value.

I recall one case in which, following out the temperature indications, perforation occurred while the patient was still in a condition of apparent "well being;" there was a falling temperature and lessening frequency of the pulse until perforation took place. In this case I was deceived into waiting, and the patient's life was sacrificed. I have observed in a number of other cases that the lowering of the temperature and the lessening of the pulse rate do not hold any relation to the conditions as they exist in the gangrenous appendix itself. In this class of cases, therefore, there is

every reason to believe, if the patient's life is to be saved, that operation will finally be resorted to, and that the earlier the operative procedure is instituted the better.

In all cases where tumor is present an incision into the most prominent portion of the same and parallel with Poupart's ligament is made—the incision of Willard Parker. I think it is a mistake to adopt any hard and fast rule for all cases; but where the tumor is in the neighborhood of the vermiform appendix, the incision should be so arranged if possible as to reach the latter in the first instance. This may be done, if Parker's incision be employed, by adding thereto a vertical incision.

Where no tumor is present, but other indications exist for operation, the incision should always be made on the outer edge of the right rectus muscle. It should be about four inches in length, and its centre should correspond to the point of tenderness laid down by Dr. McBurney.

The course to be pursued in these two classes of cases will differ greatly. In the cases in which the tumor is present with marked induration and abscess, all attempts to identify the vermiform appendix will usually be found to be fruitless, unnecessarily prolonging the operation and exposing the patient to further danger by breaking up adhesions and inviting thereby septic infection of the peritoneal cavity. I insist, therefore, where abscess has been formed, unless the appendix itself should present itself directly to our touch, that all efforts made to identify it and remove it are fraught with danger. The appendix has already become gangrenous, in the great majority of cases, and will have sloughed away; there will be scarcely any danger in the subsequent life history of the patient from appendicitis. In this class of cases, drainage and ordinary antiseptic irrigation will fulfil all the indications.

In the class of cases in which perforation has not occurred or this accident having taken place, adhesions are not formed or are but comparatively slight, the appendix should be identified and removed. Here search for the appendix is permissible. Isolation of the rest of the abdominal cavity from the point of operation by antiseptic gauze and drainage by means of the same material, together with irrigation of the parts, will fulfil the general indications.

In my experience all cases in which early perforation and septic peritonitis have occurred proved fatal. I have never seen a case recover after this accident. It has been held that the indications under these circumstances are to break up adhesions in all

directions, thoroughly irrigate the entire abdominal cavity, and then accomplish drainage by packing iodoform or other antiseptic gauze in the deeper portion of the pelvis or dependent portion of the peritoneal cavity. I question very much whether this procedure will be available in cases of the kind under consideration, for the reason that patients are in a deplorable condition after the perforation has occurred, when they reach the surgeon's hands.

Based upon these experiences, my judgment is that all cases in which inflammatory conditions referable to the appendix vermiformis are present, extreme danger to life exists; whether the simple catarrhal variety of the disease, or impacted faecal matter, or the condition be due to the extension of some inflammatory condition occurring in the neighborhood of the caecum. The great majority of these cases will perish, in my opinion, unless operative interference is carried out. The exceptional cases in which recovery without operation has taken place, have probably led to the death of a very considerable number of other patients who should have been operated upon and saved.

The question of early exploratory laparotomy is an important one, and, I believe, will be a source of greater concern to the attending physician and operating surgeon than any other feature of the case. Bearing in mind my own cases, in which early operation was indicated and refused, and in which death occurred,—and, on the other hand, the good results which in other cases have followed operative interference,—and again, the fact that some of these were cases denominated of the mild type, which would ordinarily have been relegated to purely medical treatment, and in which the operation disclosed a most desperate condition of affairs, I believe that early operative interference is indicated. In the majority of cases this will reveal conditions which fully justify the procedure. The cases in which recovery ensues after the disease is well under way are exceedingly rare. In my judgment the surgeon would be justified in opening the abdominal cavity and making an exploration of the right iliac fossa in doubtful cases, determining as a result of that exploration whether or not further interference be indicated.

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OPEN CARS PROHIBITED.—Health Commissioner Griffin, of Brooklyn, has issued the following order: "Because of the continued prevalence of the disease known as la grippe and the evils attendant thereon, and because of the detriment to the public health and the great injury to the community attended by the use of open cars on the surface roads, by virtue of the authority invested in me, I hereby order and direct that the operation of such cars by railroad companies in the city of Brooklyn, be prohibited from this date until May 15, except on days when the temperature is not less than 70 degrees F. in the shade, and then only between the hours of 10 A. M. till 6 P. M."

## CLINICAL COMMENTS ON CUTANEOUS CASES.

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BY CHARLES W. ALLEN, M. D.,

Surgeon to the Charity Hospital, etc., New York.

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Having just completed a service at the Charity Hospital on Blackwell's Island, where we have a large number of skin cases each year, and many of them most interesting and instructive, I have thought it would be acceptable to some of the JOURNAL subscribers to relate briefly a few cases which have come under my observation.

### LUPUS

is the most dignified skin affection of the hour, so we will give to it the place of honor. Though curable, it has always been a difficult disease to cure, and once well, or so in appearance, it has been most disappointing in its tendency to recur. For several years I have preferred, for suitable cases, treatment by the method of multiple scarification, the incisions being carried through the whole thickness of the patch, with other cuts crossing the first at right or acute angles, so as to divide the blood-vessels thoroughly and cause face bleeding. After the portion of the patch operated upon at each sitting is thoroughly washed in a bichloride solution (1-1000), I cover the bleeding area with absorbent cotton soaked in a 1-500 solution for half an hour, then apply until healing has taken place, the old-fashioned emplastrum hydrargyrum, melted by the heat of the hand, or, if too hard, by the addition of a little sweet oil, and spread on sheet lint.

Last year two cases were cured by me in this way, and have till now remained free from any sign of recurrence. One case thus treated was a lupus of the cheek in a lady of thirty-five years, who had been under more or less continuous treatment since she was a girl of fifteen. When Dr. Warner, a member of our medical board, returned from Berlin with a supply of tuberculin, he kindly began the inoculations in one case of lupus vulgaris and one of lupus erythematosus in my wards, and subsequently placed at my disposal sufficient fluid to carry out an experimental trial of the remedy in a case of leprosy. To be brief, a girl of sixteen, having lupus vulgaris of the face and neck, which had existed since she was two years old, showed constitutional reaction from the first

half milligram injection, and improvement went steadily on until some twelve milligrams at a dose were given, then the local changes seemed to come to a standstill. After subsequent increase in the dose, however, the same exudation, swelling and redness took place as after the first inoculations, and as these inflammatory signs subsided, it was seen that improvement was really still progressing, though slowly and only in a slight degree. In the erythematous lupus of the face, which I may say had already been vastly improved under the scarification treatment above noted, reaction, both local and general took place from the time the first injections were given, and the case has been undoubtedly benefited, in a measure at least.

A recent inoculation caused a red tender patch, the size of a ten-cent piece, to appear in what looked like cicatricial tissue, near the margin of the patch on one cheek. This lost its inflammatory redness and tenderness, and became scaly during the next few days, showing that there was diseased tissue still present, and that the lymph was still having an effect upon it.

The case of

#### LEPROSY

was one which has been in the hospital for many years, and has so far improved under the use of large doses of chaulmoogra oil that for some time he had considered himself comparatively well. The skin lesions, which had previously been abundant, had at one time wholly disappeared. The surgical treatment of the face which I described in the "N. Y. Medical Journal" of March, 1888, had greatly improved the appearance of the face, and, aside from the cosmetic effect, considerable leprous tissue was thus eliminated.

Shortly before the inoculations were begun a new erythematous and tubercular eruption had made its appearance over the trunk and arms, so that an excellent opportunity was presented to observe any effects that might result from the new treatment. No marked reaction followed the first milligram, but coldness and pain in the arms, such as the patient had never before experienced, were complained of. After two milligrams, one week later, the temperature rose to 99.4° only. Three days later a nodular lesion at the wrist became puffy, increased in size, and looked as though it might become changed into a bullous lesion. This condition disappeared in the course of a few days, and the nodule became firm, flat and somewhat smaller. After the third dose of three milligrams, patient passed a sleepless night; had chills in the morning, pains in the muscles of the extremities. Temperature



101°. Following a four-milligram inoculation on February 21st, temperature reached 103.4°, and an urticaria-like eruption of very bright red lesions appeared on various parts of the body. These were tender, and during the next few days passed through changes of color similar to those seen in erythema nodosum. The lepra lesions, already present, became brighter in color and more raised above the surface. A number upon the buttocks were especially noticeable by their increase in size, prominence and the peculiar bluish hue which they assumed. They were otherwise typical lesions of lepra, such as the patient has often had before. During the next few days a marked retrogressive action took place in all the new lesions, and only macular spots, and here and there slight scaliness, indicated where they had been. This was especially noticeable over the buttocks and thighs, where the increase in eruption had been most marked. Of course it is much too early to predict anything like a cure, or even permanent benefit, but that the inoculations have had a decided effect upon the leprous infiltration of the skin is positive even after so little of the remedy as has been used. In this connection I would like to call attention to the recent report made by Dr. Blanc to the Board of Health of New Orleans, that he has under his observation in that city twenty-five cases of leprosy. In a discussion of the subject at the Academy of Medicine two years ago, I maintained that leprosy was on the increase in this country, and cited the comparatively large number of cases among natives in Louisiana. My view, that means should be taken to prevent spreading of the disease, was opposed by most of those who took part in the discussion, and it was thought by many of the speakers that no legislative action was necessary. I hope there is no danger that leprosy will ever gain a foothold in this country; but one cannot hear of so many new cases developing among natives as have been reported from New Orleans, without thinking of what may be possible within the next hundred years.

#### ERYSIPELAS.

The paper of Dr. Rogers on "The Surgical Treatment of Erysipelas," in the February number of the *JOURNAL*, has been of considerable interest to me, as well as the discussion which took place at the Brooklyn Surgical Society. During the past year I tried the method of scarification in two cases, one being an erysipelas faciei in which the author of the paper referred to does not consider it applicable, and in this case I must say it appeared to do better than in the case of a child with erysipelas of the extremity and trunk, which, in spite of the *barrière*, proved fatal.

In the facial case it was not a pronounced success, still it appeared to arrest extension in some directions, as indeed it did, in a measure, in the child's case. I believe in this method, in spite of my experience thus far not having been greater or more brilliant, and shall give it further trial as opportunity presents. Before resorting to it, however, upon an extremity, I should in any case first make trial of the closely applied adhesive strap which has given me undoubted good results in at least two cases—one in consultation with a well-known Brooklyn physician. After a trial of a great variety of local applications in fifty cases of erysipelas (shortly to appear in "The American Journal of the Medical Sciences"), I have come to regard ichthyol as the most efficacious. It can be applied either in collodion or watery solution, in strength of from one to two drachms to the ounce. I have also had apparently good results from Aristol, but have not used it in a sufficient number of cases to make any positive statements regarding it.

#### PSORIASIS

is a disease which in my experience is rarely if ever cured; and when I speak of cure, I mean so eradicated from the system that it never returns. We continually hear of remedies which will "cure" psoriasis, but it is generally understood that what is meant is that they will remove the cutaneous manifestations of the disease. Perhaps the best drug for effecting this purpose which we to-day possess is chrysarobin—a remedy, by the way, very efficacious in many other skin affections, especially those of parasitic origin. If we accept the view that psoriasis is due to a germ, then we must assume that in removing every sign of eruption by treatment we still leave the microbe hidden in the tissues; or, if the treatment has thoroughly destroyed it, then the psoriatic patient must have a predisposition to the disease which causes him to contract it again whenever the conditions are favorable.

I find notes of nine cases treated and discharged during my recent hospital service, all in male subjects, ranging in age from twenty to fifty-six years. The time which had elapsed from the very beginning of the psoriasis varied from six to eighteen years. All gave histories of getting apparently well, and suffering relapses. One patient had been in the same wards of Charity four times during the past six years, and had gone out each time free from any evidence of the disease. Most of the patients gave a history of the abuse of alcohol, several being hard and hardened drinkers.

The duration of stay in hospital was from thirteen days to six months, with an average of forty-three days, four cases being discharged after thirteen, fifteen, fifteen and seventeen days respectively.

All were free from their eruption excepting one at date of discharge, and this one was much improved. One was retained in hospital forty-seven days after all signs of psoriasis had disappeared on account of a concomitant lichen planus of the legs. The treatment had consisted wholly or in part of chrysarobin, in ten per cent. collodion paint or ointment. In five cases aristol of the same strength and likewise combined had been employed upon a portion of the surface as a means of comparison. In most instances the patches painted with chrysarobin lost their scales and infiltration more quickly than those on which aristol was used. However, the latter drug showed much more effect than I had expected to find from it. In a report on aristol at the last meeting of the American Dermatological Association, I stated that I had not employed it in psoriasis because I did not anticipate any good results from it here. My subsequent experience has shown me that it does possess very active qualities in this affection, though till now they seem to me to be secondary to those of chrysarobin. Occasionally the latter drug produces a dermatitis of a severe type. I have seen cases in which its injudicious use has brought about a condition of the whole surface not readily distinguished from dermatitis exfoliativa.

In view of the irritating and discoloring qualities of chrysarobin, such other drugs as anthrarobin, hydroxylamine, pyrogallol, aristol, *et al.*, have been brought forward as substitutes, but none has yet seemed quite to take the place of chrysarobin with all its disadvantages.

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## A CASE OF ENLARGED BARTHOLIN GLAND, WITH SPECIMEN.

BY WALTER B. CHASE, M.D.,

Read before the Brooklyn Gynæcological Society, January 2, 1891.

Mrs. H., American, of New York City, came under my observation, early in 1890, suffering with soreness in the region of the vagina, which was painful on locomotion and coitus.

An examination revealed a growth, well backward under the right labium majus, the size of a large hickory nut, which was tender on pressure. It was evidently cystic, and I regarded it as an enlarged Bartholin gland.

I advised its removal, but heard nothing further from the case until last July, when she again presented herself at my office with the same symptoms, but in a more aggravated form. The growth was then the size of a large hen's egg, and she was ready to submit to an operation for its removal, which I did August 1, 1890, assisted by Dr. Frank Baldwin of this city and Dr. Geo. W. Chamberlain of New York. The protrusion of the growth was marked, the bulk of it being to the right of the right labia and below the ostium vaginæ; and being desirous of removing it entire, I made my incision, about two inches in length, parallel to and outside the labia majoræ, contrary to the usual custom, which is through the vaginal wall. The growth was partially behind the transverse perinæi, reaching to the tuberosity of the ischium.

It was separated from the surrounding structures principally by the handle of the scalpel, but at the point of development and attachment, just inside the ostium vaginæ, there was difficulty in detaching it from the vaginal mucous membrane, and there was a slight opening made into the vagina, which closed in about five days.

The venous hæmorrhage, as might be expected, was very considerable from wounding of the superior perinæal obturator and communicating epigastric veins. These were mostly controlled by catgut ligatures and torsion, and the cavity occupied by the tumor, now the size of a goose egg, was closed by buried catgut suture. Some venous oozing persisted, and the remaining portion of the cavity was packed by iodoform gauze and a perinæal bandage applied. On visiting my patient that evening I was startled to find extensive discoloration, embracing the right perinæal space, labia majoræ and integument, nearly to the groin, as well as to the gluteal folds, the result of extensive ecchymosis, due to slight interstitial hæmorrhage from the venous capillaries.

I then learned my patient was susceptible to the slightest traumatism, the mildest external injury always being followed by extensive discoloration. There was yet some oozing from the wound and the swelling had in some degree encroached upon the right half of the vagina.

I was solicitous lest so profound a disturbance of the capillary circulation be not followed by sloughing. To obviate this, very hot compresses from opium water, with a percentage of carbolic acid, were applied, which was prompt in its effect, and in forty-eight hours the discoloration was perceptibly diminished; the swelling had abated.

About two-thirds of this cavity healed by primary union, the balance by granulations, under rigid antiseptic cautions, and the patient made a perfect recovery.

The specimen I herewith present was the size of an ordinary hen's egg. It was removed entire, though afterward there was a slight opening, through which about two drachms of a greenish-looking fluid escaped.

No history of gonorrhœa can be found either in the wife or husband; and I am inclined to believe this growth was not of specific origin.



## AN IMPROVED METHOD OF MANAGING THE CORD IN PROLAPSED FUNIS.

BY Z. T. EMERY, M.D.

Read before the Brooklyn Gynæcological Society, January 2, 1891.

On the 3d of March, 1890, I was called to attend Mrs. G. in confinement. My patient was of medium size, well nourished and a fairly vigorous woman, thirty-two years of age. She had been attended in her previous labors by Dr. Bodkin, of this city, and all three were described as having been difficult and requiring instrumental delivery.

Upon examination the cervix was found to be well dilated and the bag of waters intact (though rupturing very soon); the funis was prolapsed to quite an extent, and the head presented at and was partially engaged in the superior strait, the position being right occipito-anterior.

The pelvis was narrow—a condition most frequently existing where this accident occurs—and seemed to prevent delivery except with instrumental aid.

The patient was placed in a knee-chest position, which was somewhat exaggerated by the tilting of the mattress, preparatory to returning the cord by Prof. Thomas' method. In attaching the sponge—which had been thoroughly cleansed in boiling water—to the cord, I made use of the following device: A tape, one inch wide and twenty inches long, was bifurcated at each end about

eight inches. Three-quarters of an inch from the point of bifurcation of one end, a button-hole slit was made in the broad part of the tape, leaving something over two inches of broad tape intact.

The sponge was secured by tying the bifurcated ends nearest the button-hole around it, and then drawing one of these through the button-hole and again tying. The bifurcated ends of that part of the tape farthest from the button-hole were then passed around the prolapsed funis, and one end was thrust through the button-hole and the two ends tied securely and further tied around the sponge.

It is claimed for this method that the broad bearing of the tape lessens the danger of destroying the circulation between the mother and child, and that the sponge is held closely adjacent to the cord without constricting the latter nor slipping from either.

Passing a loop of the narrow part of the tape into the eye of a gum elastic catheter and securing by means of the stylet, and pressing forward or upward, with the catheter in my left hand and aiding and guiding the sponge with my right, the cord was passed one side of the sacral prominence, beyond the head of the child and into the uterine cavity.

Still keeping the patient in the same position, I proceeded to apply the forceps.

This was accomplished by reversing the procedure usual when the patient lies in a dorsal position, though still preserving the relative position of the forceps to the head of the child and the pelvis of the patient, the upper blade being passed into position first and the lower blade last.

Traction was then made and the head engaged in the superior strait, when the patient was laid on her side and the delivery accomplished of a living child as in a case of ordinary forceps application.

The uterus was douched with a solution of biniodide of mercury, and the mother recovered without the occurrence of fever or any other untoward event, as the result of the treatment she had received.

#### DISCUSSION.

Dr. FRANK BALDWIN.—This recalls to my mind a case which I attended four years ago, in which there was first a presentation, and further on a prolapsus of the funis. I tried every method I could think of, both manual and postural, to replace the cord. The

patient was a primipara, and the head of the child was very large. After failing in everything else, I took the risk and gave the patient sixty drops of ergot, and waiting for a severe pain pushed the cord up. The head was born very quickly, but I saved the perinæum. I rejoiced because it was such a success; but I would be reluctant to try it again, for fear of injury to the soft parts of the mother.

Dr. COCKRAN.—I have had three such cases, in none of which was I able to get the cord back; nevertheless the children were all born alive.

Dr. MATHESON.—I have had a good deal of trouble with these cases, and I shall try Dr. Emery's method in the next case I have.

Dr. JEWETT.—I did not come prepared to detail cases, but may venture a few remarks on the subject in general.

A word first in regard to the diagnosis. It is important, if possible, to know whether the child is alive or not before interference is undertaken, for obvious reasons. But the fact that the cord has apparently ceased to beat is not alone evidence of the death of the child. Failure to hear the foetal heart does not prove it. The question frequently cannot be settled in the time allowed. In a case, then, where it is possible that the child is alive, the method adopted for repositing the cord should be proceeded with as though the child were living. It is wise, however, to warn the friends of the state of things and of the possibility that the child may be dead. The writer of the paper will recall an experience in which I was the loser by neglecting that precaution.

With regard to the treatment, a great many methods of repositing have been proposed. First, posture is perhaps an important factor in the treatment, and the so-called genu-pectoral position has from the earliest times been regarded as a *sine qua non* in difficult cases. It is not, however, indispensable, though it undoubtedly facilitates reposition and retention of the cord in the upper segment of the uterus. Reposition is always possible without it with the aid of the Sims position or the right lateral decubitus, and the comfort of the patient is promoted.

The necessity for instrumental repositors is another point which may fairly be considered debatable. The use of instruments is certainly by no means to be condemned, and in many cases it is easier to reposit by instrumental than by ordinary manual methods. The device presented by the writer of the paper is an admirable one. The use of the sponge or rubber bag makes certain the retention of the cord after it is repositied, and time may then be taken for the delivery. The use of repositors is to be commended, and

yet the instrumental method is by no means a necessity. Winckel, whose experience is large, says he has never failed to reposit by the hand alone.

With regard to the method of taxis, there is something in that. It is probably better to place the patient on the side opposite that on which the cord comes down. The cord should then be drawn toward the anterior portion of the pelvis, owing to the lesser depth of the pelvic wall at that point.

Unsystematic attempts at reposition will almost certainly fail, as we have all experienced. If you seize one portion of the cord and put it up, another comes down; and so you may keep on to the end of time.

A practitioner in Lowell, whose name I have now forgotten, proposed rotating the child about its long axis and thus winding the cord around the trunk. He claimed several successes by this method. The method does not seem to me practicable. If you could succeed in winding the cord around the child, you would then encounter the difficulties and dangers of a short cord. Another objection is the amount of intrauterine manipulation involved. More than that I have not found it an easy matter to rotate the fœtus as the Lowell authority proposes.

My principal reliance is as follows: Everything being arranged and the patient in position, hook the finger through a loop of the prolapsed cord, and twist the cord gently into a rope. Be careful to put but little torsion on the rope thus made. A loosely twisted rope will answer, and much torsion is dangerous to the child. The entire prolapsed cord is easily handled and perfectly under control. There is no difficulty in pushing it up into the cavity of the uterus and holding it there until the head or other presenting part can be crowded down into the excavation.

#### NARRATION OF CASES.

Dr. JEWETT.—A case which came under my observation a few days ago by the kindness of a medical friend is of interest in connection with the treatment of the vomiting of pregnancy. The woman had been married eight years without children. At the time I saw her she was in the ninth month of pregnancy. She had passed the first six months with little difficulty, but in the last three had vomited almost hourly. She had undoubtedly retained some food despite the vomiting, as she was fairly nourished. Her pulse was 120 to 130, and had been failing for two or three days more rapidly than before. She had been delirious for twenty-four



hours at intervals. The vomiting recurred two or three times during the few moments we were discussing the treatment, and altogether the symptoms were those of a grave case of hyperemesis. We agreed to empty the uterus; and on making an examination I found the os internum partially obliterated—that is to say, the labor had evidently begun. This perhaps accounted for the fact that the vomiting had been more severe during the last few hours. We looked for the ordinary causes of vomiting, which I take it in the severe vomiting of pregnancy are frequently to be found, not so much in the fact of pregnancy itself as in some morbid condition complicating gestation. We found no intestinal, gastric or hepatic cause, no nephritic; and the ordinary pelvic causes—that is, the inflammatory lesions about the uterus, which are so commonly a cause of vomiting in the early months—were, of course, excluded in the latter months.

The interesting point in the whole matter was this: After we had decided to deliver as promptly as possible, the doctor whose case it was immediately commenced efforts at dilatation. He had probably so stretched the cervix for fifteen minutes when I returned to the room. The patient had then ceased vomiting. The doctor telephoned me, two or three days later, that he had delivered the patient about four hours after the consultation, that she had not vomited from the time the dilatation was commenced, and was then making an uncomplicated recovery.

It was a striking fact to me that the vomiting ceased so promptly on the beginning of the dilatation. I do not know that this necessarily points to the conclusion that the source of the vomiting was in some pathological condition of the cervix. But, as we are aware, that is one of the reasons given in explanation of the hyperemesis of pregnancy—an indurated condition of the cervix—and one of the methods of treatment. Copeman's method of dilatation is based on the assumption that the trouble is sometimes due to that cause. That the cessation of the vomiting in this case was due to the dilatation can scarcely be questioned.

Dr. CHASE.—Mr. President and members of the Society: Here is a specimen—and perhaps but very little interest attaches to it, except the somewhat peculiar circumstance under which it was found. You will observe it is small in size; but it is only one-fifth the size it was before it was removed, having lost its blood. It is a small pediculated tumor, probably a polypus, which I removed from the cervix of a lady that had no idea she had such a growth; but the particularly interesting fact was that she had ceased menstruating some three or four years since. I have had no opportu-

nity to look up the literature of these cases as related to women who have passed the menopause, but I think they are not very frequent. It was removed as a precautionary measure, so that it should not be the focus of any further development. I would like to know whether it is a matter of frequent occurrence to meet with polypi at this period of life?

Dr. JEWETT.—Not so common as earlier. Was there any hæmorrhage?

Dr. CHASE.—There has not been any hæmorrhage. The patient was referred to me by another gentleman with reference to the possibility of some rectal stricture, which has not been determined as yet. Of course, if this should prove to be malignant in its character, which I think improbable (there was no appearance of cachexia), that would be suggestive as explaining the difficulty she has in evacuation of the bowels.

Dr. EMERY.—Was the blood evacuated during the removal or afterwards?

Dr. CHASE.—The tumor had its attachment just inside the cervix by a pedicle about three-quarters of an inch in length. The woman had suffered a stellate laceration during active child-bearing life, and in the removal of the tumor the pedicle became somewhat crushed, and this specimen only shows the growth itself. It was about the size of an ordinary hickory nut, and full of blood, which gradually escaped subsequent to the removal.

(Dr. Chase at this point read the notes of a case of vaginal tumor resulting from an enlarged Bartholin gland.)

Dr. CORCORAN.—Last summer I saw in Dr. Kennedy's office a patient who had a tumor about the size of a hen's egg, nearly rectangular in shape, growing from the anterior wall of the vagina, about an inch above the introitus. It gave no trouble, and its presence was accidentally noticed in using the syringe. A week before that, in the St. Mary's Dispensary, an exactly similar case presented. The tumor was in the same position and identical in shape; but I did not see this patient again. The first patient I saw on and off, and after a time the tumor disappeared to a great extent, leaving a scar, and another growth of an exactly similar character has appeared on the left border of the original one. They were not movable except when the bladder wall was moved. I mention these cases as of interest in the way of diagnosis. I would like to know if any one can help in naming them.

Dr. EMERY.—Was examination made through the bladder as well as the vagina?

Dr. CORCORAN.—A sound was passed into the bladder. There was no treatment whatever. It resembled a fibroid growth more than anything else in appearance. There was no evidence of any inflammatory condition from which it might have arisen. It sloughed off and was painless.

Dr. CHASE.—Do you usually incise tumors of this size through the vagina, or make an incision outside?

Dr. JEWETT.—I don't think the incision necessarily must be on the vaginal surface. I have treated a case recently by laying it freely open from the external surface and stuffing the cavity with irritants until it filled by granulation.

Dr. McEVITT.—Fibroids, as a rule, are oval or round in shape, whereas this was irregular, and appeared, upon looking at it first, like four or five Concord grapes on a bunch, in shape and in color.

Dr. CORCORAN.—Dr. McEvitt saw them after they were two or three months old, and while the sloughing process was going on.

Dr. JEWETT.—Is it not possible they were varices?

Dr. CORCORAN.—No; they were too large, too solid, and too firm.



#### STATE BOARD OF MEDICAL EXAMINERS.

In accordance with Chapter 507 of the Laws of 1890, the Regents have appointed State Boards of Medical Examiners as follows: From the Medical Society of the State of New York: for three years from September 1, 1891, W. W. Potter, of Buffalo, William S. Ely, of Rochester, and Maurice J. Lewi, of Albany; for two years from September 1, 1891, William C. Wey, of Elmira, and George R. Fowler, of Brooklyn; for one year from September 1, 1891, J. P. Creveling, of Auburn, and Eugene Beach, of Gloversville. From the Homœopathic Medical Society of the State of New York: for three years from September 1, 1891, William S. Searle, of Brooklyn, Horace M. Paine, of Albany, and Asa S. Couch, of Fredonia; for two years from September 1, 1891, John McE. Wetmore, of New York, and Jay W. Sheldon, of Syracuse; for one year from September 1, 1891, E. E. Snyder, of Binghamton, and A. R. Wright, of Buffalo. The Eclectic Board of Examiners has not yet been appointed.

# THE BROOKLYN MEDICAL JOURNAL.

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## *EDITORIAL.*

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### VITAL STATISTICS OF THE JEWS.

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Some years ago Dr. B. W. Richardson wrote as follows: "Facts show that from some cause or causes the Jewish race presents an endurance against disease that does not belong to other portions of the civilized communities. Among infant mortality 10 per cent. die among the Jews, and among other denominations 14 per cent. That the average duration of the life of the Jew is 48; of others, only 36. That a quarter of the Jews live beyond 71 years; and of others, 59 years and 10 months. That the extracts from the civil State papers of Prussia show a mortality of the Jew of 1.61 per cent. as against the mortality of the whole kingdom of 2.62. That the increase of the Jews is as 1.73 to 1.36 among other denominations." He further says that the Jews escape great epidemics more readily than other races. The mortality from cholera among them is so slight that the fact of its existence is even disputed. These statistics were published by Dr. Richardson fifteen years ago, and the statements made by him had reference to the Jews of Germany.

It is interesting in this connection to glance at the results of the U. S. Census of 1890, to see how the vital statistics of the Jews in the United States at the present time compare with those referred

to by Dr. Richardson. During this census a special inquiry in this direction was made under the direction of Dr. John S. Billings. Returns were received from 10,618 Jewish families, representing 60,630 persons. It appears from the figures obtained that the death-rate among this people is very low, the proportion being for males one-third, and for females one-fourth less than in the rest of the population. In the list of prominent mortality factors we observe diphtheria, diarrhoeal diseases and diseases of the spine. The mortality was relatively less from tubercular diseases than in other peoples with whom they are compared. The marriage-rate is very low among the Jews as compared with the population of Massachusetts, being as 7.4 per 1,000 to 18.9. The average number of children born to each Jewish mother was 4.66, the proportion being 5.63 for Russian and Polish mothers, and the least, 3.56 in mothers born in this country. If we compare the statistics for successive years, however, we will observe that the death-rate is increasing and the birth-rate diminishing.

The general deduction to be made from these statistics would seem to be that residence in the United States is exerting an unfavorable influence on this people, and that unless increased immigration shall make up the deficiency, the time will come when the 500,000 Jews in this country will be reduced to an insignificant number, and perhaps disappear as a separate people.

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#### TREATMENT OF ACNE.

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The relationship between acne and genital irritation was clearly pointed out by Dr. S. Sherwell in 1884, and practitioners who have profited by the advice he then gave as to treatment have had reason to be thankful to him. We know of no other skin affection which so puzzles the physician, unless he be a specialist, or for which the sufferer demands such speedy relief. Cutaneous diseases which attack portions of the body which are concealed by wearing apparel from the gaze of the public can be endured for an indefinite time, but if they make their appearance on the face, then the peace of mind of both doctor and patient is in a state of unrest until the blemish is removed.

Dr. J. M. Winfield has made a valuable contribution to this same subject in the March number of the "Journal of Cutaneous and Genito-Urinary Diseases." He reports excellent results from the passage of sounds in the male, and the use of the vaginal

douche in the female. He makes the following generalization: "In nearly every case of acne in the female there will be found some menstrual or genital trouble. Almost all women have a temporary outbreak of acne at the menstrual period, and if there is a chronic rosacea, it is apt to be aggravated at that time." To establish a principle, whether it be in medicine or elsewhere, requires iteration and reiteration; and the thanks of the profession are due Dr. Winfield for again bringing to their attention a method of treatment of a rebellious affection which is so unique as to be called "Sherwell's Method."

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EDITORIAL COMMITTEE.

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The Council has appointed the following Editorial Committee for the year 1891: J. H. Raymond, F. D. Bailey, Alex. Hutchins, W. M. Hutchinson and W. Browning.

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JOSHUA M. VAN COTT, JR., M.D.

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By the resignation of Frank Ferguson, M.D., from the chair of Histology and Pathological Anatomy in the L. I. C. Hospital, a vacancy has been created which the Regents of that institution have filled by the appointment of Joshua M. Van Cott, Jr., M.D., who has been the Adjunct Professor in that department.

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OBITUARY.

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GEORGE F. LLOYD, M.D.

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Dr. George F. Lloyd was born at Springfield, Ill., on the 23d day of June, 1861. He was the second son of Dr. B. B. Lloyd, a former slaveholder of the South, although a loyal Union man, and practicing medicine in Springfield at the time of his son's birth.

Dr. Lloyd attended the public schools of his native place until thirteen years of age, when his family removed to Nebraska, thinking to benefit his father's failing health by a change of climate.

His father died three months after reaching his new home. Dr. Lloyd then studied at home and also in the office of Dr. Sowers until he went to attend medical lectures at Omaha in 1880. After receiving his degree he went into partnership with his preceptor, Dr. Sowers, and became surgeon to the Burlington and Missouri Railroad.

Desirous of perfecting himself in his profession, he attended lectures at Bellevue Hospital Medical College, and received a degree with the class of 1888. After a year's service as interne at the Kings County Hospital, he accepted the position of surgeon on the steamship *P. Caland*, of the Netherlands Line. He remained in this position about a year, when he again entered the service of the Department of Charities of Kings County as Assistant Superintendent at the Insane Asylum.

On the 9th day of October, 1890, while engaged in his duties at the Asylum, he met his death in a tragic manner that shocked the entire community. His manner of meeting death was characteristic of the man. Unassuming at all times, gentle and kind to an extreme degree, generous to a fault, in him seemed blended the generous impetuosity of his Southern sires and the sturdier traits of a long line of New England ancestors. He was an affectionate son and brother, a loyal friend, a genial member of society, an enthusiast in his profession, and met his death while discharging its duties.



### GEORGE ROGERS CUTTER, M.D.

The following resolutions were adopted by a committee of the Board of Physicians and Surgeons of St. Catharine's Hospital, at their last regular meeting, March 10, 1891:

The Board of Physicians and Surgeons of St. Catharine's Hospital, Brooklyn, N. Y., after having learned of the sudden illness and death of George Rogers Cutter, M.D., which took place on February 12th, desire to place on record their high appreciation of his professional attainments and manly character as member of this Board.

Dr. Cutter had been associated with this Hospital practically since the founding of the institution, and during this time he has been in active service until within the past few months, when increasing business compelled him to accept a transfer to the Consulting Staff.

Our colleague was, in truest sense of the word, "a busy man," and though never enjoying robust health, he managed to accomplish an amount of work that stronger men well might envy. Not only did he find time to keep fully

abreast of the advanced improvements in his specialty, but also to devote to the cultivation of general and special literature. His "Dictionary of German and English Medical Terms," his translation of Frey's great work on "Histology," bear evidence to his untiring industry amid the exacting duties of his professional work.

In his life—too soon and sharply brought to its close—we see nothing wherein, as friend, counselor and physician, that we may not take as an encouraging and instructive example.

In his friendship firm and faithful, in his counsel cautious and wise, in his profession diligent and ambitious to keep in the front ranks of his chosen work, where he has easily sustained an honored position, he has filled the full measure of a well-spent life.

This Board has lost by his death an able counselor, a manly associate and a skillful surgeon; and while they bear testimony to the greatness of their loss, they desire to convey to his bereaved wife and family their sincere sympathy and condolence.

JAMES S. FEELY, M.D.,  
R. E. VAN GIESON, M.D.,  
JACOB FUHS, M.D.

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## PROCEEDINGS OF SOCIETIES.

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### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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A regular monthly meeting of the Medical Society of the County of Kings was held in the Society rooms, 356 Bridge Street, on Tuesday evening, February 17, 1891, at 8 o'clock. There were about 150 members present. Dr. West in the chair. The minutes of the annual meeting were read and approved.

The council reported favorably on the names of Drs. Palmer Townsend, W. S. Robbins and Wm. F. Koerner, and recommended that they be elected to membership.

The following applications for membership were presented:

Dr. Thomas Bakewell Hegeman, 485 Halsey Street, Coll. Physicians and Surgeons, N. Y., 1890; proposed by Dr. H. A. Fairbairn; Dr. Geo. R. Fowler.

Dr. Samuel B. Casey, 542 "A" Hancock Street; proposed by Dr. Chas. P. Peterman; Dr. W. M. Hutchinson.

Dr. Arthur M. Hamilton, 504 Greene Avenue, Med. Dept. Columbian University, Washington, D. C.; proposed by Dr. Geo. R. Fowler; Dr. W. J. Cruikshank.

Dr. Wm. E. Butler, 29 Monroe Street, L. I. C. H., 1890; proposed by Dr. Frank E. West; Dr. Wm. Hutchinson.



The following, having been favorably reported upon by the Council, were declared elected to membership:

Drs. Lester C. Baldwin and Geo. W. Neidecker.

#### SCIENTIFIC BUSINESS.

The first paper of the evening, by Dr. John Aulde, of Philadelphia, entitled "The Study of Pharmacology and Its Relation to Therapeutics," was read by Dr. J. B. Mattison, in the absence of Dr. Aulde. This paper was discussed by Drs. Eccles, Kretzschmar and Briggs.

The second paper of the evening, entitled "A Plea for Early Operation in Disease of the Vermiform Appendix," by Dr. W. J. Cruikshank, was read, and discussed by Drs. Charles McBurney, of New York, Fowler, Rand, Figueira and Pilcher.

#### NEW BUSINESS.

The chair announced that the position of librarian was vacant, the candidate elected at the annual meeting having declined to serve. On motion, duly seconded, the Council was authorized to appoint a librarian.

The following obituary committee was appointed on the death of Dr. G. R. Cutter: Dr. Henry R. Price, Dr. James W. Fleming, Dr. Lawrence Coffin.

On motion, the meeting adjourned.

W. M. HUTCHINSON,  
*Secretary.*

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### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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A regular monthly meeting of the Medical Society of the County of Kings was held on Tuesday evening, March 17th, at the Society rooms, 356 Bridge Street, at 8 o'clock, Dr. West in the chair. There were about 100 members present.

The minutes of the previous meeting were read and approved.

The Council reported favorably upon the applications for membership of Drs. Chas. F. Perry, Univ. of Pa., 1888; Wm. E. Butler, L. I. C. H., 1890; Chas. A. Olcott, Bellevue, 1876; Thos. B. Hege-man, Coll. P. and S., N. Y., 1890; Samuel B. Casey, Coll. P. and S., Chicago, 1887; Arthur B. Hamilton, Columbia University, Wash- ington, D. C., 1890.

The Council also reported that, acting in accordance with the vote of the Society referring the selection of a librarian to the

Council, they had elected Dr. Wm. Browning as librarian for the ensuing year. The above report was unanimously adopted.

The following applications for membership were presented :

Dr. Chas. W. Brunner, 623 Wythe Avenue, L. I. C. H., 1891; proposed by Dr. David Myerle; W. M. Hutchinson.

Dr. H. De Haven Cameron, Methodist Episcopal Hospital, Coll. P. and S., N. Y., 1889; proposed by Dr. H. Beeckman Delatour; James P. Warbasse.

Dr. R. Curtis Gray, 345 Lafayette Avenue, L. I. C. H., 1890; proposed by Dr. R. C. Brewster; Chas. N. Cox.

The following gentlemen, having been favorably reported upon by Council, were declared elected to membership :

Drs. Palmer Townsend, W. S. Robbins and Wm. F. Koerner.

#### SCIENTIFIC BUSINESS.

The first paper of the evening, entitled "Non-Valvular Heart Murmurs," by Dr. Henry Conkling, was read, and discussed by Drs. Dickinson, West, Jewett, Briggs.

The second paper of the evening entitled "The Measurement of Galvanism for Therapeutic Use," by Dr. Jos. H. Hunt, was read, and discussed by Drs. Emery, Alleman, Stub, Jewett, Henry.

#### UNFINISHED BUSINESS.

The obituary committee on the death of Dr. Geo. F. Lloyd presented a report, which was read by the Secretary, and, on motion, unanimously adopted.

#### NEW BUSINESS.

The chairman presented a communication from Dr. Douglass, President of the Medical Society of the County of New York, extending an invitation to the members of the Kings County Society to attend the next meeting of the New York County Society, on the 23d of March, the subject for discussion at that meeting being "Medical Men and the Secular Press," with special reference to the question : Under what circumstances and to what extent may members of the medical profession present their views and opinions to be published in the secular press.

The chair further stated that he had acknowledged the receipt of the communication, and thanked Dr. Douglass, on behalf of the Society, for the courtesy of the invitation.

On motion, the meeting adjourned.

W. M. HUTCHINSON,

*Secretary.*



A contemporary of Spigelius and Merachalis at Padua, and one whose contributions to Anatomy and Surgery did so much for the glory of that great university, was Jerome Fabricius, commonly called Fabricius of Aquependente, Aquependente being his birthplace, to distinguish him from the famous Swiss surgeon and contemporary Fabricius Hildanus, who was born at Hildan.

In this portrait we see him decorated with the gold chain of the Knight of St. Mark, which the republic of Venice has decorated him with as a badge of its respect.

Jerome was a boy of great promise and eager for an education, and was accordingly sent to Padua, where he distinguished himself as a proficient student.

After completing his university course he at once engaged in the study of medical sciences under the immediate supervision of that most illustrious anatomist Gabriel Fallopius.

He was at first demonstrator of anatomy under his great master, and when Fallopius died, Fabricius, though but twenty five, was at once elected by the Venetian Senate to take his place in the chair of anatomy, to which was subsequently added that of surgery.

He filled the double professorship with increasing reputation and renown for almost half a century (1562-1609).

"Fabricius possessed every requisite to insure and maintain success; he was kind and generous, learned and eloquent, sound in judgment and skilful in practice, earnest and animated by a glowing enthusiasm. His fame extended over the continent of Europe, from every portion of which students flocked into Padua to listen to his lectures and witness his demonstrations."

The republic of Venice recognized his talents and importance. The Senate built him a new, very spacious and magnificent anatomical amphitheatre, and had his name inscribed on the front of it.

It also decreed him an annual stipend of one thousand crowns, and when infirmity and old age came upon him and rendered him incapable of continuing his labors, his salary was paid him ungrudgingly to the day of his death, and after this event (May 21, 1619) it honored his name and memory by a noble statue.

He made many improvements in the art of surgery. No less than eighteen editions of his surgical works have been published in various languages and in different countries.

They are richly illustrated with many plates of ingenious instruments and complex apparatus, which will vie with the orthopædist's of this mechanical era in surgery.

As a physiologist he is also remembered. "His study of the formation of the chick in ovo is a model of patient and well-directed research. His essay on the language of brutes is worthy the attention of physiologists of the present time."

But it is as an anatomist he is best known. His great work *Opera omnia anatomica et physiologica* is a folio of nearly five hundred pages, illustrated with hundreds of figures engraved on sixty-one full-page plates.

His work on the formation of the fœtus contains thirty-three folio plates illustrating the subject both in the human and other animals.

His greatest discovery, and the one for which we know him best, is the discovery of the valves in the *whole system* of veins, and our genial friend Dr. Fisher couples with the honor that of having been the preceptor of Harvey, to whom he furnished the key wherewith he unlocked the mysteries of the circulation of the blood.

He refused fees for his services as physician and surgeon, and placed in a cabinet set apart for the purpose such presents as his generous and grateful patients insisted on his taking. Over this cabinet was inscribed this sentiment: "LUCRI NEGLECTI LUCRUM."



# PROGRESS IN MEDICINE.

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## SURGERY.

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BY GEORGE RYERSON FOWLER, M. D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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### CONTRACTURE OF THE BICEPS IN ARTHRITIS OF THE ELBOW.

Terrillon (*Progrès Méd.*, 1890, No. 24). An especial form of contraction of the biceps is described by T. occurring in the early stage of inflammation of the elbow-joint, and which may derive especial importance from the standpoint of early diagnosis. It is believed by T. to be a reflex phenomenon originating in the terminal nerve-filaments in the synovial membrane, and compares it with those contractions described by Charcot as consequent upon hysterical convulsions.

The treatment must be adapted to the individual case, and will vary with the stage of the affection and the extent of fixation of the joint. Massage, elastic extension or tenotomy may be employed.

### THE OPERATIVE TREATMENT OF CLEFT PALATE.

A. Predhöhl (*Jahrb. d. Hamburg Staatskranken anstalt*, Jahrg. 1889, p. 274). The author groups thirty-one cases operated upon by Schede. In all cases the method of muco-periosteal transplantation of Langenbeck was followed. The suture material was silk; the position of the patient, sitting upright; the anæsthetic consisted of the morphia and chloroform combination. Cocaine anæsthesia was found to be insufficient. As a rule, Schede does not operate before the fifth year. In one case, attracted by Julius Wolf's successes in the operation as performed early in infant life, Schede operated upon a two-year-old patient. Complete failure resulted. The after-treatment of the cases consists of rinsing the mouth with permanganate of potash in weak solution. The results were as follows: Twenty-six cases, complete union after one operation; in one case, union after two operations and several cauterizations; in three cases more than two operations were necessary. In only a single instance (above mentioned) was there complete failure. The linguistic result was, in the main, satisfactory.

## THE OPERATIVE TREATMENT OF THROMBOSIS OF THE SINUSES.

Salzer (*Wiener med. Wochenschrift*, 1890, No. 34; *Centralblatt f. Chirurgie*, No. 7, p. 142). S. reports two cases in which operative interference was practiced in cases of thrombosis of the transverse sinus following suppurative otitis. Trephining at the base of the mastoid, exposure of the sinus and puncture of the latter, followed by incision, irrigation and gauze, constitute the procedure. In the first case the operation was performed too late; but in the second, recovery followed.

S. considers the operation justifiable in all cases of ear suppuration in which high fever and brain symptoms arouse the suspicion of an intracranial complication, even though the evidences of pyæmia are absent.

## RESECTION OF THE RIBS VS. DRAINAGE, IN THE TREATMENT OF EMPYEMA.

(*Medicinische Abtheilung des Hamburger allgemeinen Krankenhauses*, S. 37.) The author reports eleven cases of simple drainage, in eight of which it became subsequently necessary to perform resection of the ribs. In twenty-one cases he performed the latter operation, two of which were recognized as hopeless; in one of the latter, death followed the operation (from tuberculosis). With this exception, an invariably good result followed. Of these, one was discharged cured in less than one month; ten in less than two months; four in less than three, and five after three months.

The difficulties incident to placing the tube in the most favorable location for drainage, together with the impossibility of removal of thick fibrinous deposits through the same, render the operation of simple drainage inapplicable in many cases. As a palliative procedure, however, in cases in which the condition of the patient forbids the operation, or consent is not obtainable, it may be resorted to. On the other hand, in cases comparatively recent, a simple incision in the intercostal space and tube drainage will result, in a certain proportion of cases, in recovery.

## THE OPERATIVE TREATMENT OF PLEURITIC EXUDATION.

Lewaschow (*Vratsch*, 1890, Nos. 40, 41; *Centralblatt f. Chirurgie*, 1891, No. 8, p. 148). During aspiration of the pleural cavity, as soon as the patient complains of pain, the fluid which has been removed is replaced by a corresponding quantity of a normal solution of chloride of sodium. The aspiration is then continued, the removed fluid being replaced from time to time, as above described. At the close of the operation there usually remains a small quantity

of the chloride of sodium solution in the pleural cavity, which is readily absorbed. The author states that a slight reactionary fever may accompany the latter. In cases of long standing, particularly those of suppurative pleuritis, the exudation was prone to recur, in which case the operation of resection of the ribs is recommended by the author.

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OBSTETRICS.

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BY CHARLES JEWETT, M. D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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HEART DISEASE IN PREGNANCY AND LABOR.

Mackness (*Ed. Med. Jour.*, 1890). The author takes exception to the well-known views of Hart. He regards venous congestion, systemic and pulmonary, as the great cause of danger to the pregnant or parturient woman suffering from valvular lesions. Since this occurs earliest in mitral lesions, especially stenosis, mitral disease is most dangerous. But since it occurs also in the later stages of aortic disease, advanced aortic lesions are equally dangerous. In other words, the gravity of the cardiac complication in pregnancy and labor depends more on the extent than the nature of the lesion. With reference to treatment the author remarks that cardiac tonics are of little use in mitral stenosis, owing to the atrophy of the left ventricle and the degeneration of its muscular fibres which takes place in these cases. In all cases cardiac tonics should be withheld until there is evident failure of compensation. Prior to this, careful diet, moderate exercise, and the use of iron and arsenic are all that is required. When compensation fails, tincture of strophanthus in doses of two and one-half minims every four hours is the best of the heart tonics. It should not be used after compensation has been restored. Venesection may be practised in case of great venous engorgement. Since bearing down in labor tends to increase the venous congestion chloroform should be used during the second stage and should be continued thereafter until the placenta has been delivered. The inhalation of nitrite of amyl is of service in the engorgement of the right heart which follows delivery of the placenta by dilating the pulmonary arterioles.

## HYDRASTININE IN UTERINE HÆMORRHAGE.

Falks (Centralblatt f. Gyn., No. 8, 1891). The author declares *hydrastin* a cardiac poison while hydrastinine, the oxydation product of *hydrastine*, he says, does not affect the heart injuriously. The latter deserves the preference for therapeutic use. Used hypodermically, hydrastinine causes no irritation and is less painful than ergotine. F. regards it as an active and reliable hæmostatic. It has proved particularly valuable in the treatment of hyperplastic endometritis, congestive dysmenorrhœa, hæmorrhage of the virgin uterus and in that attending uterine myomata. He recommends its use before the menstrual period as a prophylactic against menorrhage. It is best given hypodermically in an aqueous solution of the muriate. The dose is three-quarters of a grain. The drug will undoubtedly be found of service, too, in the hæmorrhages of obstetric practice.

## INFECTION OF THE FŒTUS WITH PNEUMONIA.

(Centralblatt f. Gyn., No. 8, 1891.) A. Vitti reports a case of a woman who was seized with a double lobar pneumonia in the ninth month of pregnancy and died thirty hours after delivery. The child died sixty-seven hours after birth. Post-mortem examination of the child revealed a left-sided pneumonia with fibrinous pleurisy, pericarditis and peritonitis. Pneumococci were found in abundance in the spleen, and in the exudates of the lungs and of the serous membranes.

## FŒTUS IN FŒTU.

Kolisko (Centralblatt f. Gyn., No. 8, 1891) demonstrated a case of foetus in foetu before the Association of Physicians at Vienna. The child lived and developed normally for five weeks except for the presence of an abdominal tumor. It died at the end of that time from the combined effects of a bronchitis and pemphigus. Post-mortem examination revealed a cystic tumor occupying the right half of the abdomen and extending from the liver to the pelvic entrance. The contents of the cyst consisted mainly of a brownish fluid containing epithelium. Two solid masses were also found in the cyst, one of which presented a process having the appearance of a rudimentary foetal extremity; the other corresponded to a portion of the face and showed, on microscopic examination, structures of the under jaw, tongue, teeth, etc.



## TREATMENT OF FISSURED NIPPLE AND ENGORGED MAMMARY GLAND.

Hirst (Univ. Med. Magazine, March, 1891) recommends the use of an ointment made up of equal parts of castor oil and subnitrate of bismuth for the treatment of bad cases of fissured nipple. The mixture makes a smooth soft ointment which relieves pain and serves as an excellent protective. The nipple and surrounding skin should be carefully cleansed and disinfected before the ointment is applied. The application need not be removed should it be necessary for the child to nurse the affected nipple.

For the mammary engorgement and pain which frequently accompanies fissured nipple the writer uses an application of lead water and laudanum in addition to the usual sling-compress. The lead and laudanum lotion is applied on a cloth covering the whole breast and is renewed at short intervals. The development of mammary abscess under this treatment is rare. The writer prefers to nurse the well breast, drawing the milk from the affected one by means of a breast pump till the cure is nearly complete. If the child must nurse the cracked nipple, a glass shield with a rubber tip should be employed.

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PREVENTIVE MEDICINE.

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E. H. BARTLEY, M. D.,

Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, Long Island College Hospital.

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A TYPHOID FEVER EPIDEMIC.

The last "Annual Report of the State Board of Health of Connecticut" contains a history of an epidemic of typhoid fever strikingly similar to that occurring a few years ago at Plymouth, Pa., and illustrating the importance of thorough disinfection and care of the stools in this disease. The epidemic occurred in the small village of Polkville, consisting of twelve houses. The water supply was obtained from a small pond or reservoir fed by a small mountain stream, and by springs. For twenty-five years this same water supply has been used by these same families, and no sickness has been caused by it. Suddenly, however, typhoid made its appearance in every house of the twelve, with one or more cases. Investigation established the fact that in November a case of typhoid fever occurred in the only house situated along the little mountain stream which fed the reservoir. The discharges,

without disinfection, were thrown on the sloping ground near this stream, at the time covered with snow. Warm rains carried the dejecta into the stream, thence to the families in the village below. The epidemic began two weeks after the thaw, and the chain of evidence seems to be complete.

Had the volume of water been very much larger, we should have had in this case, owing to the dilution, probably a less number of cases in proportion to the population drinking it. Suppose a large city of people had partaken of the diluted dejecta of this one patient. Physicians should everywhere be impressed by such occurrences with the importance of the disinfection of the stools of typhoid fever patients.

#### POST-BANQUET HYGIENE—DIED OF DINNERS.

The "Annales of Hygiene" for March, 1891, gives some pointed remarks upon the above subjects. As a rule, our prominent men have been abstemious, hard-working individuals, until, as the direct results of this very work and abstemiousness, they have become prominent. Then they give loose rein to the appetite, until gout, apoplexy or fatty degeneration of the heart or other internal organs prematurely terminate their brilliant career. If liquor unmistakably affects the stomach and the brain, banqueting most certainly deranges the liver, even though gluttony and over-indulgence in wine be not parts of the banquet. The author compares the methods of living of prominent men above sixty years of age, in Europe and America, and reaches the conclusion that banqueting in public life in this country is the enemy to old age. A man of sixty who does not materially modify his life of forty so as to avoid all excitement, to live slowly, and to have plenty of rest, is doing himself an injustice that is likely at any moment to prove fatal.

#### SACCHARIN IN RUSSIA.

Following the example of France and Italy the Russian Medical Council has prohibited the use of saccharin in articles of food and drink. Hereafter this substance will be dispensed by pharmacists only on the prescription of physicians.

#### TO PREVENT ADULTERATION.

With this aim in view the municipal authorities of Rome have recently passed a law requiring the names of all makers and vendors of alimentary substances injurious to health, or adulterated, to be published in the daily papers. [This is undoubtedly

the most powerful lever known to prevent adulteration, as has been demonstrated in some cities in this country. Of what educational value is the work done in the city of Brooklyn by its Health Department? The public, who support the army of food inspectors, are entitled to the benefits of their knowledge, which they do not get when it is published only in an annual report to be exchanged with other health boards. If their work is of any worth, why should it be so carefully guarded from public gaze? Let us have the benefit of the knowledge of adulterations, and of the merchants who carry on the business of cheating us on the quality of our food.—E. H. B.]

THE PREVENTION OF LEAD POISONING.

M. Lavrand, according to the "National Druggist," February, 1891, has found that the administration of pills of iodide of iron, either alone or with phosphide of zinc, an efficient remedy to prevent or arrest lead poisoning in those who work in white lead. The author found that although his patients continued to work in positions where they were likely to suffer, they improved in general health. The peculiar earthy complexion and anæmia characteristic of saturnism disappeared under their use, and the amount of hæmoglobin increased.

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PATHOLOGY.

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BY JOSHUA M. VAN COTT, JR., M.D.,

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RENAL FINDINGS IN ACUTE GASTRIC AFFECTIONS, WITH REMARKS ON  
HYALINE CASTS.

Kobler (Wiener klin. Wochenschrift, 1890, No. 28) remarks that equally severe renal symptoms may obtain in cases of cholera nostra as in Asiatic cholera. The urinary picture is in single cases identical with that of Cholera Asiatica.

The renal findings are, according to K.'s view, caused by diminished flow of blood to the renal epithelium, which induces nutrition disturbances in the renal cells. Early appearance of hyaline cylinders leads to the conclusion that they do not result from amalgamation of degenerated epithelium, or from any secretion from it, but from coagulation of albumen discharged into the uriniferous

tubules (how?), and that probably certain ferment-like bodies are found early in the damaging of the epithelium, which produce the coagulation.

#### INTRACELLULAIRE ZÄHEN BEI CARCINOMEN.

Siegenbeck van Heukelom (*Weekbl. van het Nederl. Tidschr. voor Geneesk.*, 1890, II., No. 13). The author's experiments cover carcinomata of all parts of the body, and particularly their metastases—axillary glands in mammary, hepatic metastases in gastric, pulmonary metastases in gastric carcinomata, etc.

Sections were colored with borax-carminé and hæmatoxylin and eosin.

Most peculiar, generally round or oval intracellular spheres were observed, with occasionally a double contour, and protoplasmic contents, and in many cases a nucleus which took a good carminé stain.

In isolated cases the spheres were not entirely filled by their contents, and here the nucleus-like body is present, but does not stain.

The nucleus of the epithelial cell in which the sphere lies is pressed flat on the side. The author found these spheres in cancers of all sorts, particularly in cancerous glands. Their number is very various; they appear in primary cancer in places of strong growth not markedly numerous, while in some metastases they were very abundant.

They are in single cases distinguished from epithelial cells, are found in every variety of carcinoma, and are not found in many, mostly primary and small-cell cancer.

Here were to be seen mostly small spherules, which, colored with eosin, and not carminé, lay in the protoplasm, also in or against the nucleus, and were not highly refractive. In other cancers highly refracting spheres covered in the nuclei. Occasionally still smaller green-glittering masses lay in the spheres, which (the masses) contained carminé-staining bodies. The small spheres were found more commonly where development was at hand, the larger in vacuoles in the epithelia. Apparently the same protoplasmic masses infiltrated the stroma in part in great numbers.

Infiltrations of the stroma, both with and without these bodies, were found. They are of the size of or smaller than leucocytes.

Finally, strongly refractive drop-like bodies were found in more or fewer numbers intracellular, intercellular and in the stroma.

The author believes the large bodies may be parasites, but does not assert this positively. In any event, the carcinoma cells contain things which do not appear in normal cells. It is an open question whether they are ætiologically significant in carcinoma.

TENIA ECHINOCOCCUS HEPATIS.

(Long Island College Hospital, April, 1891.) In a recent post-mortem at the Long Island College Hospital, held on the body of a male Italian emigrant who came to the hospital dying of what was supposed to be a pleuro-pneumonitis, the section revealed a right lung which was pressed high up into the apex of the thoracic cavity; the pleural cavity contained a quart and a half of semi-translucent serum, floating in which were many flakes of recent lymph. The pleural surfaces were everywhere thickened and covered with recent lymph. Under the base of the right lung and perforating the diaphragm was a cystic tumor the size of a large orange, which communicated with a similar cystic mass involving the upper half of the right lobe of the liver. Another similar cystic tumor lay between the liver and the right lateral wall of the abdominal cavity, directly under the diaphragm, and communicated freely with the other two cysts.

The three cysts were composed of tough fibrous tissue resembling in all respects inflammatory tissue. The larger cyst was in the liver, nearly the half of the upper lobe of which was involved by the growth. On opening, the cysts were found to be filled with many hundred smaller cysts (hydatids) of all sizes and in all stages of formation. Some of the cysts were already empty, some contained a grumous material, but most were filled with characteristic fluid, cholesterine crystals and the scolices of the *T. echinococcus*. These latter were exceedingly numerous and in a most beautiful state of preservation, the hooklets being found normally disposed in two rows around the rostellum.

These cases are comparatively rare here, but are common in southern Europe and Iceland.

MICROSCOPICAL FINDINGS IN TUBERCULOSIS OF THE SKIN AND VISIBLE MUCOUS MEMBRANES AFTER TREATMENT WITH KOCH'S LYMPH.

Schimmelbusch (*Deutsche med. Wochenschrift*, 1891, No. 6) publishes results of microscopical study of cases in v. Bergmann's clinic, covering a period of more than two months, and observations on over thirty different preparations in various stages of the treatment.

The following are his microscopical findings :

1. Necrosis in the tubercles was not proven.

2. Neither cell-destruction, coagulation-necrosis nor karyolytic changes in the tubercles was shown, even after two months' persistent treatment with Koch's lymph.

3. Exudative inflammation in the tuberculous nodules is induced.

4. This hastens the destruction of ulcerating nodules and loosens necrotic masses.

5. The injections *per se* do not produce necrosis.

The great expansion described by Koch as vanishing or smelting of the tissues should be ascribed to the above findings (3, 4). Clinically the retrogression of the tuberculous nodules is very remarkable; but inasmuch as the tubercle cells reveal microscopically no change, it is to be supposed that this regression lies not within the bounds of an abnormal cell death, as exemplified in coagulation-necrosis, but in the course of natural cell life. The cells of the lupus nodes die, leaving no trace behind—the picture of simple atrophy. When and if this vanishing is permanent cannot yet be certain. Up to date, under constant dosing with increasing quantities, complete healing has not occurred.

[The exact nature of the action of Koch's lymph in the tissues of tuberculous patients is as yet unknown. But some ideas regarding it may be gathered from the behavior of the bacillus tuberculosis in tissue. It has probably never been shown that the bacillus itself causes cell necrosis: the destruction of tissue in which these organisms are found growing is much more rationally to be regarded as due to the formation of new inflammatory connective tissue in circumscribed areas, and the consequent interference with the nutrition of the areas of cell territory involved in the process through compromise of the blood-vessels and lymphatics. Whether the formation of connective tissue be the result of the immediate action of the bacillus (mechanically) or of its ptomaine we do not yet know. In any event, Schimmelbusch's investigations seem to support the view that the ptomaine might act causatively in the production of inflammatory tissue, because, as he says, after introducing the lymph into the system, the already inflamed tissue becomes more inflamed, and the very intensity of the thus increased inflammation hastens the tissue destruction. Now, while Koch claims "vanishing" or "smelting" of the tuberculous tissues, he does not say that the lymph does it *primarily*, and it is matter of little difference to either the patient or his claim whether the result be primary or secondary.

The formation of giant cells filled with bacilli is sufficient evidence that protoplasm can exist perhaps indefinitely in the presence of these germs.

Theoretically the lymph should eventually destroy the bacillus, on the hypothesis that the effeta of an organism are inimical to its existence.

We do not know yet how far this theory may be applied practically, but it would seem that our lack of knowledge may be on account of our lack of *time* for observation. No one can say how long tubercle bacilli may exist dormant or semi-active in the system without giving rise to any particular semeiology; nor can we yet say that persistent and long-continued exhibition of Koch's lymph in the human economy will not eventually *certainly* destroy the bacillus.

We are not convinced, by any of the cases on record, that miliary tuberculosis has been induced by the Koch treatment. It is much more reasonable to suppose that this condition was already latent before treatment was instituted.—V. C.]

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## OPHTHALMOLOGY.

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BY RICHMOND LENNOX, M. D.,

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### SYNCHYSIS SCINTILLANS.

Gallemaerts (Inaug. dissert., 1890; Rev. Gen. d'Ophtal., Oct., 1890) gives a careful account of the histological examination of three eyeballs affected with synchysis scintillans during life. He differs from those who claim to have found tyrosin, and concludes that the appearances are due solely to the presence of cholesterin. The brilliant white globules which Poncet thought to be phosphatic incrustation of a cluster of cells, Gallemaerts holds to be collections of pigmented cells derived from the pigmented epithelium lying between the ciliary processes. The development of cholesterin, which is not found in the normal aqueous or vitreous, is undoubtedly favored by accidental or operative traumatism; but the author is lead by his microscopical observations to reject the supposition that the crystals are the result of degenerative changes in extravasated blood. The lens is generally but slightly affected, and never contains the crystals of cholesterin. Hyalitis could not be regarded as a cause, and the author is led by exclusion to regard the appearances under consideration as due to a choroiditis. In

his specimens he found extensive choroidal changes, and inflammatory exudation in the uveal tract. Some diathetic influence is probable, and he believes that synchysis scintillans is more common among the alcoholic, the arthritic, and those with any serious disorder of nutrition. The local cause is to be found in the uveal tract. Little can be said as to treatment. The condition may be regarded as a contra-indication to operation, but chiefly, the author thinks, on account of the general condition of which its presence is an evidence.

#### LESION IN QUININE BLINDNESS.

De Schweinitz (Oph. Rev., Feb., 1891), after alluding to the views held by previous observers of this form of amaurosis, gives the results obtained by the hypodermic administration of quinine to a series of six dogs. His records show that when quinine is given hypodermically to dogs in quantities varying from one grain to the pound to four grains to the pound, blindness, usually accompanied by other general disturbance, is apparent in from three to fourteen hours. The exact time of the onset of the loss of vision was not determined. In one animal the blindness remained practically complete twenty-nine days after a single injection of three and three-quarter grains to the pound. The ophthalmoscopic features in animals were similar to those recorded among human beings with quinine amaurosis. In all the pupils were immovably dilated. Each dog was killed or died from the effect of the drug, and microscopical examination was made of the eyes, optic nerves and tracts, chiasma and occipital lobes. There was no gross lesion in the nerve, disc or retina, with one exception, in which there was in one eye decided dilatation of the blood-vessels, and the central vein was plugged with a clot, white thrombi filling the smaller veins. Dilatation of the vessels to a slight degree was also seen in some of the other discs. Transverse sections of the nerves showed no marked lesion, only slight evidence of œdema or of increase in connective tissue; but it is worthy of note that even in dogs blind for over a month there was no evidence of atrophy of the nerve fibres, nor in the earlier stages was there any appearance of neuritis. The chiasma was in each case normal in every respect. In the sections taken from the cuneus, in all instances the same lesion was present, namely, a remarkable dilatation of the pericellular lymph spaces, with degeneration of the protoplasm of the cell. The lesion was probably most marked in the dog that had been longest blind. The author realizes the possibility of these changes being due to imperfections of technique, and does



not claim to have found any microscopically demonstrable lesion of quinine amaurosis. It is not unlikely that the conjectures of those who have placed the lesion in the optic nerve between the chiasma and eyeball have come near the truth, and that there is really a species of œdema. At the same time the influence of quinine upon the peripheral circulation must not be forgotten, and the fact that, as shown, under its influence a clot may form in the central vessel. This is probably an extreme case, and should such an example occur in a human being, recovery from the blindness would not be obtained.

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## DISEASES OF THROAT AND NOSE.

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BY WM. F. DUDLEY, M.D.,

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### DEVIATIONS AND SPURS OF NASAL SEPTUM.

Mowre and Bergonié (Jour. Lar. and Rhinol., No. 12, vol. iv.).

*a. Operative Indications.*—The septum of the nose is never strictly perpendicular, but only when the deviation produces pathological conditions are we authorized to actively interfere.

The following conditions warrant active measures :

1. Stenosis of one or both nasal fossæ, by interfering with physiological functions of nose, put the entire organism under conditions of defective vitality. It may cause nasal catarrh, defective hearing, or affections of Eustachian tube or tympanum. It also makes treatment of any other existing nasal trouble difficult.

2. *Reflex Neuroses.*—Frequently spurs, not sufficient to be obstructions, cause such neuroses as migraines, neuralgias, spasmodic cough, and spasms.

3. Malformations resulting from exostoses.

*b. Treatment.*—Various operative measures have been resorted to—the gouge, the saw, the cutting forceps, and the punch—all painful and sanguinary, and necessitating frequently prolonged after treatment from formation of adhesions between the resected portion and the mucous membrane of opposite turbinated bone.

Electrolysis employed for two years with most excellent results by author, also by Dr. C. Mirot and Dr. Garel, of Lyons, produces destruction of deviated septa without pain or loss of more than a few drops of blood.

The electrolytic method employed is monopolar positive galvano-puncture, or bipolar galvano-puncture.

In first procedure, a large flat indifferent electrode, 10 by 20 c.m. square, was applied between the two scapulæ of the patient, being connected with the negative pole of the battery.

This electrode being in place, the locality of spur cocainized, a steel needle connected to positive pole is inserted in deviation to be destroyed. The circuit is then formed (1) by battery of thirty volts, (2) by a continuous rheostat, (3) by a milliampèremetre, (4) the patient.

The circuit is closed with the rheostat at maximum of resistance; this is slowly diminished for a space of two minutes, until current is at greatest intensity required. While this is being accomplished the patient experiences sense of constriction and tensing, which ceases as soon as the resistance of rheostat is increased. The intensity of current required varies from 10 to 30 milliampères, depending upon the density and amount of tissue to be destroyed. In the second method two sharp-pointed electrodes are inserted into the prominence, the positive pole into the denser tissue. The needles should be thoroughly isolated, except at points, by means of thin caoutchouc tubing. The circuit and method of procedure is same as in monopolar operation; the quantity of electricity required rather less.

The sensations of the patient are less painful in latter method, as the derived currents must be exceedingly slight with the two electrodes in such close proximity. This operation is simple and the result as solid and certain as in any form of resection.

#### THE NATURE OF THE TONSILS AND LYMPHOID TISSUE OF THE PHARYNX.

Mayo Collier (*Jour. Lar. and Rhinol.*, December, 1890). The author accepts as a definition of a lymphatic gland, a mass of definitely encapsulated follicles found in the course of large lymphatic trunks and not connected with mucous surfaces. The tonsils are not, therefore, lymphatic glands, but simply a mass of lymphoid or adenoid connective tissue found in sub-epithelial tissue, in the meshes of which lymphatic corpuscles are lodged and undergo proliferation. These patches are called lymphatic follicles, and are grouped in alimentary canal in four different ways:

1. With indefinite limits, as in œsophagus, mouth and rectum.
2. Defined patches of very minute size, as in solitary gland of small intestine.
3. Groups of follicles—Peyer's patches.

4. Isolated masses of adenoid tissue, found in recesses and in mucous pouches, as at roof of pharynx, between pillars of fauces, and at base of the tongue.

There is no difference, except in shape, between a Peyer's patch and a tonsil; the function must, therefore, be the same; and it is to arrest and alter substances, both solid and fluid, that may be absorbed by the mucous surface. As this surface is very extensive and absorbs with great avidity, there is necessity for a continuous sheet of lymphoid tissue surrounding mucous membranes.

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## GYNÆCOLOGY.

BY WALTER B. CHASE, M. D.

### THE EARLY DIAGNOSIS OF UTERINE CANCER.

Audry in the "Lyon Medicale," November, 1890, claims that in inflammations of neck and cervical cavity which are doubtful in their character and in which the diagnosis is ordinarily made only by microscopical examination of excised fragments, that if the diseased tissues may be scooped off the cervical cavity, it is conclusive evidence the disease is epithelioma.

In chronic cervical metritis this may appear hard or soft; but in neither case is it possible to remove the epithelial covering by scratching it with the finger-nail, and the only condition in which it can be done is in malignant disease.

It is affirmed that no cases of cancer exist in which fragments for diagnosis cannot be so removed.

If experience of others confirm these observations, they will be of great clinical value.

Dr. Thomas A. Ashby, of Baltimore, at a meeting of the American Gynæcological Society spoke of pain as a factor in utero-pelvic diseases. It is often hard to understand why there is such a disproportion between the severity of the pain present and the magnitude of the pelvic lesion. Pain often arises from minor forms of displacement, chronic inflammations, old adhesions, and vascular disturbances. These conditions can sometimes be neither detected or righted without an exploratory incision, and the surgeon should not hesitate to use the knife under such circumstances.

Many cases of ovarian neuralgia can be only hopelessly treated so long as the menstrual function continues, and for these cases Dr. Ashby laid down this rule: "When useful occupation of a patient is so impaired that life is a burden to herself and friends, laparotomy is warranted and palliative treatment is useless."

DIFFERENTIATION OF UNILOCCULAR, MULTILOCCULAR, PAROVARIAN AND MALIGNANT CYSTS.\*

UNILOCCULAR CYST.	MULTILOCCULAR CYST.	PAROVARIAN CYST.	MALIGNANT CYST.
Surface smooth.	Surface irregular and lobular.	Occurs in very young persons.	Occurs more frequently after forty.
Fluctuation free in all directions.	Fluctuation circumscribed and interrupted.	Is comparatively rare.	Nodular and irregular.
Growth not so rapid.	Growth rapid.		Grows rapidly.
Contains the usual ovarian fluid.	Contains often blood corpuscles, and the fluid is denser and perhaps discolored.	Fluctuation very superficial, and walls of cyst very thin.	
Circumferential measurement below umbilicus 35-45 inches (Peaslee).	Circumferential measurement below umbilicus 55-78 inches (Peaslee).		Solid contents, or is solid.
Adhesions not common.	Adhesions common.		Glands involved.
General health not so rapidly involved.	Rapidly fails.	Does not affect the general health much.	Emaciation and cachexia come on quickly.
			Pain is present, especially at night.
If tapped the tumor is emptied, and quickly refills.	On tapping we do not empty the tumor.	Does not usually refill after tapping.	Ascitic fluid surrounds the tumor, and on examination the "proliferating cell" of Foulis is detected in the fluid examined.

\* H. McNaughton Jones: Manual Diseases of Women and Uterine Therapeutics. Edition, 1890.

Dr. Polk, of New York, in replying to Dr. Ashby, said that so far as the remarks of the latter referred to simple excisions of exploration, he agreed with him perfectly. Diseased conditions of the ovaries were, in his opinion, not always to be made out either by bi-rectal or bi-vaginal touch, and in such cases the ovary could be cut into, the trouble righted if possible, and the organ sewed up and returned to the abdominal cavity. Complete amputation should always be avoided if possible. He considered it never justified in simple catarrhal salpingitis.

DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

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KOCH'S TREATMENT OF LUPUS, ETC.

In the "Annales de Dermatol. and Syph.," Feb. 25, 1891, is given report of a committee or commission of the physicians attached to the Hôpital St. Louis, Paris, France, in regard to the

properties and advantages of the treatment of lupus and tuberculosis of the skin by Koch's method. The report covers the time from November, 1890, to almost date given above. The following gentlemen—Drs. Vidal, Besnier, Fournier, Hollopean, Quinquand and Tenneson—unite in presenting a tabulated report of in all 38 cases treated by them since November 30, 1890, in which it appears that of all treated, 12 cases showed no change, 18 scarcely any improvement perceptible, 6 in which there was some distinct improvement, and 2 in which improvement was fairly decided. All the data as to number and amount of injections, reactions, etc., are given; in fact, the paper possesses great scientific value.

They, the physicians, all unite in deprecating the method, considering it, in relation to results, as being too painful in its symptoms and reactions; and, as regards the latter, considering it too alarming, and often dangerous.

We find less on the matter in the German dermatological journals; but Pick, of Prague, notably, and after him some of the North German authorities, still strongly maintain the efficaciousness of the lymph treatment. Those of Austria, however, are more cautious, or less enthusiastic, when not inimical.

In England a conviction seems general that it is (to say the most) of dubious value, though its possibilities and potentialities are yet to be made clearer. Among dermatologues of New York and vicinity the same opinion holds, and inoculations for skin diseases have been about given up practically, and for the same reasons as alleged in the French report. Besnier, who was the chairman of the French Commission, in the course of his paper, likens the effect of the lymph to that of "an erythematous storm." He says, too, that while the symptoms and eruptions resemble those of erysipelas, they are not erysipelatos (?). See *Journal for March, 1891*.

In the "Ergänzungsband of the Klinisches Jahrbuch for 1890" appears, according to authority of the "New York Medical Journal," the clinical reports of most of the best men, surgical and medical, of north and middle Germany. Considerably over 1,000 cases of tubercular troubles are reported upon, 932 being pulmonary in character, 188 cases of lupus. The showing as to improvement is, at the best, admittedly unsatisfactory, even to those who may be supposed to be somewhat prejudiced in favor of the method, as the journal says it reflects credit on the impartiality and judicial candor of the experimenters.

## PSOROSPERMOSIS.

A great many learned disquisitions have been lately made and articles printed on the relation of this so-called condition to various diseases. There are a number of skin affections in which these bodies do, or seem to, play an important part, such as Paget's disease, malignant epithelioma, papillomata, molluscus contagiosum, keratosis follicularis, or psorospermosis folliculaire végétante, etc.

Darier, of Paris, in a paper under the last heading, was the first of late years to bring up the consideration and discussion of these bodies, which he claims have an etiological action in these affections, and which he and many others claim are of an animal parasitic nature belonging to the order of protozoa, these being the oval psorosperms or coccidiæ.

Morrow, White and others have reported cases of disease during the last year or two, which presented nearly or almost the same clinical lesions as those of Darier, and a later case, that of Dr. Jas. C. White, of Boston, has been microscopically examined by Dr. Bowen, of Boston, with the results of finding large numbers of these cells or bodies in the diseased tissue.

Dr. Lustgarten, lately of Vienna, now of New York, presented at the late Berlin Congress some sections from the skin of a patient whose trouble had been diagnosed as lichen ruber by most of the dermatologues of the New York Dermatological Society, in which numbers of these bodies or cells were present. A paper was read by him on the case and specimens, and it was claimed by him that the disease was an essential psorospermosis.

Piffard probably deserves more than any one the credit of early pointing out the presence of these bodies in the disease in which they appear in greatest abundance and most typically, viz.: "Molluscum contagiosum;" this appeared in his first book, "Elementary Treatise on Diseases of the Skin," 1876. He there expressed his belief that these peculiar highly refracting bodies were changed and corneified epithelial cells. He has lately (*Jour. Cutan. and Genito-Urin. Diseases*, Jan., 1891) reaffirmed this, and made a valuable contribution to their study, by watching their behavior under polarized light. He finds their refraction under this condition to be such as would be expected in corneified epithelium, and not such as would exist in protoplasmic and parasitic entities. It is a brilliant paper, and, unless it can be refuted, reads like a demonstration.

Very recently his opinion has been supported by what appears to be a very competent observer (Borrel) who arrives at his conclusions by microscopic and bacteriologic work.

A. Borrel: On significance of the figures described as coccidiæ (psorosperms) in epitheliomata (*Archives de Méd. Experimentale* II., No. 6, Nov., 1890). This last author claims that the bodies are nothing more nor less than modified or degenerate epithelial cells. All attempts at culture on his part had failed. From their reactions to staining fluids he came to same conclusions. What Darier and Wickham have described as developmental changes in the cells, he explains differently, he affirming that there is no relation between the bodies in which they assume there is, etc.

L. D. Bulkeley, New York, gives a good resumé of the general literature of the subject, and authors who had written up to that date, in a paper in "*Phila. Med. News*," Nov. 8, 1890, the case which Lustgarten made the subject of his paper at Vienna, having been seen by him many years since. Dr. A. R. Robinson read a paper on the subject before one of the Dominion of Canada societies. He is understood to maintain the parasitic character of the disease. There are many observers, doubtless, at work on this subject, and we shall be freed from doubt before long as to whether this organism or tissue has much to do with these malignant or serious dermic troubles.

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## BACTERIOLOGY.

BY B. MEADE BOLTON, M.D.,

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### MALIGNANT ŒDEMA AFTER INJECTIONS OF TINCTURE OF MUSK.

Dr. J. M. Van Cott, Jr. (*Centralblatt f. Bakteriologie*, etc., Bd. 9, No. 9), makes the following report of experiments done in Koch's laboratory in the Hygienic Institute in the University of Berlin, Germany:

"Several cases, as is already known, have been reported in which death of patients with malignant œdema has taken place after subcutaneous injection of tincture of musk. In view of this fact, I thought, therefore, I would make the experiment of testing whether the bacilli of malignant œdema could be found in musk.

“At the advice of Prof. C. Fraenkel, under whose direction I conducted this work, I procured a number of intact musk sacks, the surface of which was covered about one-half with the skin of the animal, and consequently thickly set with hair. This hair was well calculated to hold dirt, etc. The sacks were cut up under observance of the usual rules of precaution and the pieces placed in sterilized water. After twenty-four hours, at ordinary temperature, a dirty grayish liquid was formed, from which a number of guinea-pigs were injected, each with 2 c.c., some in the subcutaneous connective tissue and some in the abdominal cavity. In two of the three sacks prepared and examined in this way, the œdema bacilli were found in the infusion. The infected guinea-pigs died of typical malignant œdema, and the anærobic bacteria were cultivated without trouble.

“Of course, a number of different kinds of micro-organisms developed on gelatine plates made from the infusion. But only one of these—a small actively motile rod—was capable of growing at a high temperature. This proved, however, not to be pathogenic.

“Inoculation of guinea-pigs with 2 c.c. each of pure tincture of musk, obtained from a number of different apothecaries, were negative. Nevertheless, the possibility cannot be denied that the bacilli or spores of the bacilli of malignant œdema may occur in tincture of musk; for tincture of musk is obtained from the sacks without the use of heat, and in its preparation relatively small amounts of dilute alcohol are used.”

#### BACTERIOLOGICAL EXAMINATION OF INFLUENZA.

M. Kirchner (*Zeitschrift f. Hygiene*, Bd. 9, Heft 3) has made an examination of the bacteria in the sputa and blood of patients suffering from influenza, and from the thoroughness of the work and the uniformity of results, his observations appear to be very trustworthy. The examinations were made upon thirty patients in the military garrison in Hanover, Germany. Cultures were made in all cases where it was possible, but circumstances prevented the attempt to cultivate organisms in some cases. Still the microscopic examination in all and the cultures in the cases where these were made showed the constant presence of an organism with distinct characteristics. This organism was the only one found in the blood and the only one which was found in every case in the sputa. It is a diplococcus much smaller than Fraenkel's



diplococcus pneumoniæ (Sternberg's micrococcus Pasteuri), and the distance between the two cocci is greater in the former than in the latter. The latter has somewhat pointed ends, whereas Kirchner's diplococcus has perfectly rounded ends. Kirchner's organism grows much more vigorously on agar than Fraenkel's, though like the latter it only grows at a high temperature, but does not die out as rapidly. The experiments upon animals are not yet complete; but where a culture of the organism was injected into the thoracic cavity of a guinea-pig, the animal died in twenty-four hours, and the organisms were found in the lungs. Inoculations under the skin had no effect. The diplococcus, judging from these experiments, seems not to have special pathogenic properties.

[Although Kirchner's observations make it probable that the diplococcus described above is the cause of epidemic influenza, one of Koch's postulates is unfulfilled, viz., the production of influenza or a similar disease by inoculating pure cultures in animals; may be this test is impossible, for, as in several other cases, it is possible that lower animals are not susceptible to influenza. This makes the proof that the organism is the cause of the disease much more difficult, and necessarily leaves the matter in doubt.]

DISINFECTION.—The question of disinfection would seem to be one which had long ago been exhausted, and yet Behring (Desinfection, Desinfectionsmittel und Desinfectionsmethoden, *ibid.*) has published the results of experiments carried on in the Hygienic Institute in Berlin, which show that in much of the work done under this head many important conditions were lost sight of. It will not be possible in this review to give even a meagre outline of Behring's experiments, but the original article is worthy of careful study, as it is a most thorough treatment of the subject.

Behring points out that in all experiments on disinfection the following points must be taken into consideration:

"1. The unquestionable proof [in any given case] that the disinfection has been accomplished, *i. e.*, the real killing of the organisms [not merely the prevention of growth].

"2. The chemical character of the material to be disinfected.

"3. The kind of bacteria.

"4. The length of time that the disinfectant works.

"5. The temperature at which the disinfectant is made to work.

"6. The number of bacteria."

Behring shows that the above points have not all been considered, as a rule, in previous experiments with disinfectants, and hence are faulty.

## MEDICAL JURISPRUDENCE.

BY SIDNEY V. LOWELL.

There is probably no incident in the range of the operations of surgery that has given rise to more speculation than the phenomena as to the feeling of relation of the body after the amputation of any of its members with the missing part.

It is known to all practitioners of medicine, and in fact to all intelligent men, that some persons who, through the stroke of battle or from the edge of the surgeon's knife, have had part of their limbs cut away, have feelings so closely resembling those which they had in the lost member before its separation, that the impression upon the mind is precisely the same as if that part of the body was still incorporate with the rest. These feelings, I understand, are various. Many persons cannot describe them so as to be fully understood. They say, "I feel my foot," meaning the foot that was lost.

It is fair to suppose, however, that these feelings are not usually, if ever, pleasant ones. If they are not accompanied by actual physical pain, they must always bring feelings of sorrow for the loss of the limb that was part of the life of the loser—literally, "bone of his bone and flesh of his flesh."

All sorts of emotions of this and similar kinds are said to come and go through the minds of those who have suffered such a loss—and alas! they do not always go.

I remember reading lately of an officer in our army who lost his leg in the line of his duty. It was left, after its removal, upon the ground, in a wild region remote from human habitation. The weather that followed was bitterly cold. The officer commenced to feel sensations precisely similar to those he would have felt if his leg was being frost-bitten. He suffered greatly, and complained that his leg was freezing.

At considerable risk to himself, a brother officer went to the place where the lost limb was left, found it, and buried it in the ground. After this the maimed man ceased to feel the sensations of which he had complained.

Now this brings me to this point: Are the feelings that I have described real feelings of actual pain in the body, or an affection or hallucination of the mind, an imagining of pain only? And even if the latter, to what extent should compensation be required by law on account of these feelings, from any person whose wrongful act may have caused the loss of the limb?

I assume that in such a case as that of the officer I have spoken of, that it would be doubtful if a recovery could be had. I have, however, always considered that in most cases compensation could be recovered. In this connection there has recently been a decision by the Court of Appeals of this State to which I will refer.

Alfred Hickenbottom, a resident of New York City, while in the act of boarding a passenger car of the Delaware, Lackawanna and Western Railroad Company at the city of Newark, New Jersey, on his way home, fell upon the track, having been thrown from the train, owing to its having been started by the locomotive with a violent jerk. The car wheel passed over his right arm, so injuring it that its amputation was necessary near the shoulder. He testified that he thereafter experienced pain, seemingly in his amputated arm and hand, such painful sensation continuing up to the trial, but gradually getting less, except the sensation of a swollen hand constantly and still continued.

Dr. Herman C. Herold, of St. Michael's Hospital of Newark, a physician who was called as a witness by the plaintiff, was asked this question by the judge who presided at the trial: "In your opinion as a medical man, following an accident such as here described and an amputation, does it follow that the patient experiences the pain of an imaginary hand and lower part of the arm?" To which question the railroad's attorney objected; but which was answered: "It is not the rule, but it frequently happens."

Mr. Hickenbottom recovered on the trial the unusually great sum of \$25,000 on account of his injuries, included in which, it was fair to infer, was compensation for these sensations, as of pain in the lost hand and arm—the imaginary hand and arm referred to in the judge's question.

The counsel for the railroad company contended that the judgment should be reversed, on the ground that these feelings were merely a delusion, that the pain was imaginary and not the direct or natural result of the injury. The court, however, through Judge Bradley, delivering its opinion, in which all the judges concurred, held that this was to the plaintiff "painful suffering that he had endured after the accident and the amputation of his arm; and whatever was its nature, if his statement was true, the sensation was that of pain and the result of the injury, his bodily pain resulting from which was properly the subject of proof and consideration."

This decision, made by the second division of the court of last resort of this State, will doubtless be broad enough to bring in all ordinary cases of suffering, all but extreme cases of delusion on this head. It is satisfactory that it was by an united court.

## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.*

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A MANUAL OF THE PRACTICE OF MEDICINE. By Frederick Taylor, M.D., F.R.C.P., Physician to, and Lecturer on Medicine at Guy's Hospital, etc. With illustrations; pp. 877. Philadelphia: P. Blakiston, Son & Co., 1890.

This book is one of the most practical treatises on the Practice of Medicine that we have upon our shelves. Discussing etiology and pathology as little as possible, the author devotes his special attention to the description of symptoms, to diagnosis, prognosis, and treatment. Nor has he given much space to the discussion of theories, finding that the facts of medicine are amply sufficient to fill a volume as large as this, and being convinced that these facts require to be seized and held fast by beginners in medicine, not only for the sake of diagnosis and treatment, but also for the right estimation of the various theories which lie at the basis of a rational practice.

The author devotes no less than sixty pages to the subject of Diseases of the Skin, giving to it more consideration than is usually given in works on Practice.

EPILEPSY: ITS PATHOLOGY AND TREATMENT. By Hobart Amory Hare, M.D., B.Sc. Clinical Professor of the Diseases of Children, etc., in University of Pennsylvania; pp. 228. Philadelphia and London: F. A. Davis, publisher, 1890.

This volume, No. 7, in the Physicians' and Students' Ready Reference Series, is an essay to which was awarded a prize of 4,000 francs by the Académie Royale de Médecine de Belgique in 1889. This fact alone is a sufficient testimony to its scientific and practical value. It is undoubtedly one of the best monographs on the subject of epilepsy which has ever been written.

OINTMENTS AND OLEATES, ESPECIALLY IN DISEASES OF THE SKIN. By John V. Shoemaker, A.M., M.D., Professor of Materia Medica, Pharmacology, etc., in the Medico-Chirurgical College of Philadelphia, etc. Second edition. Revised and enlarged; pp. 298. Philadelphia and London: F. A. Davis, publisher, 1890.

The Physicians' and Students' Ready Reference Series has already obtained a strong hold on professional favor, and this volume, as No. 6 of that series, is one of especial value. The author has not confined himself to the consideration of those ointments which are official in this country, but he also describes those used in Great Britain and her colonies, in France, Germany, Austria, Italy and Spain. A reader may, therefore, in this one book "obtain a conspectus of the whole subject of inunction as it exists to-day in the civilized world."

## MISCELLANEOUS.

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### LONG ISLAND COLLEGE HOSPITAL.

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The Alumni Association of the Long Island College Hospital, at its annual meeting, held March 10th, elected the following officers for the ensuing year: President, Paul H. Kretzschmar, M.D.; Vice-President, Joseph H. Raymond, M.D.; Recording Secretary, Henry L. Cochran, M.D.; Corresponding Secretary and Treasurer, Reuben Jeffrey, M.D.; Councillors, C. E. De La Vergne, M.D., Alex. Rae, M.D., R. M. Mead, M.D., Geo. Drury, M.D., F. H. Stuart, M.D., Henry Conkling, M.D.

At the annual dinner of the Association, given at Remsen Hall, March 11th, 265 guests were present. At the close of the dinner, Dr. F. H. Colton, president, welcomed the guests on the part of the Alumni. Speeches were made by T. S. Moore, Esq., of the Board of Regents, Mayor A. C. Chapin, Rev. H. A. Powell, Clark Bell, Esq., C. F. McDonald, M.D., Rev. R. R. Meredith, Dr. F. E. West, and W. H. Clowminzer, president of the graduating class.

The Commencement Exercises were held at the Academy of Music, March 12th. The graduating class contained eighty-two men. The orator of the evening was Prof. T. Gaillard Thomas, and the valedictorian, H. T. Hotchkiss, M.D. Gold medals were awarded to Richard Slee, M.D., and J. O. Polak, M.D., both of the graduating class.

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### THE KINGS COUNTY MEDICAL ASSOCIATION.

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The Executive Committee have appointed the following members as delegates to the Annual Meeting of the American Medical Association at Washington: Drs. Jonathan Wright, A. N. Bell, H. R. Price, R. M. Wyckoff, Wm. McCollom, J. R. Vanderveer, F. C. Raynor, L. A. W. Alleman; and as delegates to the Annual Meeting of the Fifth District Branch of the New York State Medical Association, at Brooklyn: Drs. F. C. Burnett, R. H. Sullivan, J. E. Richardson, E. T. Jones, E. Reynolds, A. Boyce Marion, A. Wieber, Willard Parker Beach.

The May Meeting will be occupied by a paper by Dr. Jonathan Wright, on "The *Æ*tiology and Treatment of Atrophic Rhinitis."

## COLLEGE OF PHYSICIANS AND SURGEONS AND COLUMBIA COLLEGE.

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It has been announced that on July 1, 1891, the College of Physicians and Surgeons of New York will become a part of Columbia College, its Board of Trustees being abolished, and all their powers being transferred to the trustees of Columbia. A bill is now before the Legislature to authorize this transfer.

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## THE PREVENTION OF NARCOTIC INEBRIETY.

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At a meeting of the American Association for the Cure of Inebriety, held in the New York Academy of Medicine, February 18, 1891, Dr. J. B. Mattison offered the following preamble and resolutions, which were adopted, and a committee appointed to secure restrictive legislation :

*Whereas*, A leading cause of morphinism, chloralism and cocainism is the facility with which morphine, chloral and cocaine can be procured from pharmacists; and

*Whereas*, The refilling of prescriptions containing these drugs is a potent factor in the rise and growth of these diseases; therefore, be it

*Resolved*, As the sense of this Association, that no retail druggist should sell morphine, chloral or cocaine, except on a physician's prescription; that no prescription containing morphine, chloral or cocaine should be refilled, except on the written order of a physician.

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## INTERNATIONAL CLINICS.

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J. B. Lippincott Company will, beginning with April, issue quarterly thereafter a work entitled "International Clinics." This work will comprise the best and most practical clinical lectures on medicine, surgery, gynæcology, pediatrics, dermatology, laryngology, ophthalmology and otology delivered in the leading medical colleges of this country, Great Britain and Canada. These lectures have been reported by competent medical stenographers and thoroughly revised by the professors and lecturers themselves. The object of the work is to furnish the busy practitioner and medical student with the best and most practical clinical instruction, in concise form. Each volume will consist of over 350 octavo pages, illustrated with photographic reproductions of important cases.





SERVETUS.

The portrait gallery of the men whose names have been connected with the great epochs in medicine, especially the different periods in the history of the discovery of the circulation of the blood, would be incomplete without that of the martyred medical theologian MICHAEL SERVETUS, "whose career reads rather like that of a hero in some romance than of a real historical personage."

He was born in Spain in 1509 or 1511, and began his varied career as a law student in Toulouse, which he relinquished for theology, afterwards trying a diplomatic career, accompanying as secretary Quintana, confessor to Charles V., upon the occasion of the imperial coronation at Bologna; and afterwards attending the Diet of Augsburg; then changing his name to Villenovus, he becomes a medical student in Paris, supporting himself as a proofreader and editor of learned books; and after a short career as a doctor of medicine he returns to theology, and his life is suddenly cut off by his death at the stake, being burned alive at Geneva, October 27, 1553, by the order of Calvin, for heresy as the author of the "*Christianismi Restitutio*"—the work in which he described the cardiac and pulmonary circulation.

Well had it been for the Church of Christ, and for physiology, had he confined himself to the medical profession.

I take the liberty of quoting liberally from Prof. Henry C. Chapman's lecture on the subject.

In his work, the whole edition of which was destroyed with the author, so that not more than five copies are supposed to be in existence, Servetus, in discussing the nature of the vital spirit and the manner in which it is elaborated, describes the flow of the blood from the right ventricle of the heart, by the pulmonary artery, through the lungs, and by the pulmonary veins to the left ventricle, distinctly stating that the blood does not pass from the right ventricle to the left through the septum of the heart, as was commonly believed, but by a long passage through the lungs, from the right ventricle, and that it is in the lungs that the blood is agitated, prepared, and changes its color, thence passing to the left ventricle by the pulmonary veins.

It is probable that very few scholars became acquainted with the discoveries of Servetus, on account of the diligence with which the one thousand copies of the *Christianismi Restitutio* were searched out and destroyed; and in consequence the working out of the complete system was delayed for Harvey, and other investigators, who each contributed their portion, in ignorance of the work of Servetus; a though Vesalius, who was a fellow student with Servetus in the medical school of Paris, in the second edition of his "*Anatomy*," 1555, disclaims the idea that the septum of the heart is perforated.





which, if possible, definite conclusions may be drawn. To this end all cases should be fully reported, and the tendency which some of us have to report only those cases which are attended with excellent recoveries should be overcome. I feel, however, that a reasonably careful study of the literature which has already been contributed will result in less conservatism being practiced, and that accumulated knowledge, based upon carefully reported cases, will result in the saving of many lives by early operation which, by the adoption of conservative measures would be lost.

Very recent and interesting literature is to be found bearing on the subject from the hands of such eminent surgeons as Bull, Gill Wylie, Weir, Stimson and others. The contribution which I have found most instructive is that of Dr. Charles McBurney, published in the *New York Medical Journal* of December 21, 1889. In this article Dr. McBurney makes a very strong plea for early operation, basing his conclusions on a large and varied experience, together with the careful observation which is characteristic of the man. His handling of the subject is so admirable, and so thoroughly supplies a long-felt want in this direction, that any attempt on my part to add anything to the ideas which he has distinctly set forth would be superfluous. It is not, then, with a view of suggesting anything new or original that I have taken the liberty of addressing you this evening, but simply to ask that the treatment of this class of cases be considered from a less conservative standpoint, and to report the results of my own experience. And it is to my associate, the general practitioner, to whom I beg particularly to speak, because, in the great majority of instances, it is he who is called upon to decide the question of surgical counsel and operation.

The more experience I have with this class of disease, the more fully I am convinced that the conservative ideas which have been advanced regarding treatment are largely owing to errors in diagnosis. These errors, it seems to me, can be traced in a large measure to the variety of terms which are being used in the textbooks to express the same condition. The terms perityphlitis, paratyphlitis, typhlitis, etc., are not only worthless in that they do not express the existing condition, but are decidedly confusing and misleading. They give rise to the idea that we are dealing with distinct diseases, when, as a matter of fact, the seat of trouble is, almost without exception, in the appendix. This fact has been proven so thoroughly that it admits of no further discussion, and I have no hesitancy in saying that as soon as it is more generally and thoroughly recognized, every case will be viewed from a

surgical standpoint. Many lives which, in my opinion, might have been saved by timely surgical interference have been sacrificed on the altar of doubtful conservatism, due to no other reason than the confusion of ideas spoken of. In an article by the writer entitled "Perforation of the Vermiform Appendix," published in the July (1889) number of the *BROOKLYN MEDICAL JOURNAL*, a case is cited which bears so strongly on this point that a brief mention of it will, I think, be interesting.

The patient, a boy thirteen years of age, was perfectly well up to June 16, 1887. At that time he was seized with vomiting. He had no rise in temperature and no acceleration of the pulse, and complained of no pain. After having vomited twice, the stomach became quiet, and he felt better. Supposing the case to be one of acute indigestion of a mild character, I advised the administration of a mild saline cathartic. The bowels were moved freely, and he seemed as well as ever. The next day, however, he was suddenly seized with pain in the right iliac region, and when I arrived at his bedside I found him in a state of almost complete collapse. Diagnosis of perforation of the appendix was made, and after administering enough morphia, digitalis, whiskey, etc., to bring about a complete reaction, I sent for our much lamented associate, Dr. Frank W. Rockwell, to whom I stated my suspicion, and suggested the performance of an immediate laparotomy. Owing to the non-existence of the symptoms of so-called perityphlitis, such as are found in the text-books, an operation was not considered justifiable, and the patient, after an illness of seven days, died of acute general peritonitis. An autopsy which was made by Dr. B. F. Westbrook revealed a perforation of the appendix at its cæcal attachment, through which was found presenting an intestinal concretion. I made the statement at the time, and my experience since then has not altered my opinion, that this boy's life might have been saved by the performance of laparotomy and the removal of the appendix. The diagnosis was made sufficiently early, and after occurrence of collapse in consequence of perforation, the reaction was sufficient in a very short time to relieve us of all anxiety in that direction. Even after the establishment of a well-developed peritonitis, I think the operation, under the circumstances, was not only justifiable, but indicated. The position held by Dr. Rockwell in relation to this case represents pretty thoroughly the opinion which, up to that time, had been expressed by the profession at large. About this time Dr. Henry B. Sands expressed some very original views on the pathology and treatment of perityphlitis, and reported a successful operation for perforation of the

appendix. In speaking of this case, Dr. McBurney says: "The case was a most brilliant one throughout, and illustrated particularly well the cleverness of diagnosis and the rapidity of successful action which we all remember as so characteristic of the reader of that paper. It should not be forgotten that at that time such action was a very bold step into ground that was almost unknown. We did not all agree with Dr. Sands in the views which he expressed in regard to the pathology of perityphlitis, but these views did not prevent him, when the proper case occurred, from making, in regard to treatment, a brilliant stride in advance of others. This case gave an impulse to the study of inflammatory affections of the vermiform appendix from which we shall not recover for a long time. Beginning with the first suggestions of Dr. Willard Parker, which taught surgeons how to save many lives, although by a slow and often unsatisfactory process, Dr. Sands ended his work in this direction by showing us how we might cut short at its very inception a disease that is, even to-day, responsible for many deaths."

The cases to which I particularly wish to call your attention this evening are three in number.

CASE I.—On the evening of February 26, 1890, I was requested to visit Mr. R. R. B., a gentleman with whom I had been personally acquainted and in whose family I had attended for several years. His age was thirty-seven; he was an American, and his occupation was that of a merchant. Previous to this attack he had always enjoyed the most perfect health. He informed me that on the day previous, after having eaten dinner, he experienced a feeling of fullness and a feeling of goneness in the region of his stomach. He slept well that night, but when he arose in the morning he still complained of this uncomfortable sensation. He ate the ordinary breakfast, however, and gave himself no special concern, supposing his condition to be one of indigestion. The sensation of fullness was still with him when he arrived home from business, but did not prevent his eating his dinner as usual, although he remarked to his wife during the course of the meal that he was eating rather as a matter of duty than from inclination. Before entirely finishing his dinner he experienced a little pain in the abdomen, which caused him to leave the table and seek his room. This pain was colicky in character, and was not referable to any particular spot. Some domestic remedies, one of which was a dose of paregoric, were given him, and this failing to give relief, I was sent for. I found him in bed. He was suffering some pain, but not at all severe. An examination revealed a

normal pulse and temperature, and no tenderness of the abdomen could be discovered, although careful search was made. There was no nausea or vomiting; the bowels had moved quite naturally, and there was nothing in his condition which pointed to anything more than a slight disturbance of his digestion. Ten minims of Magendie's solution were administered hypodermically, and in the course of ten or fifteen minutes he stated that he was perfectly comfortable. I instructed his wife to give him a bottle of the solution of the citrate of magnesia in the morning, and left the house, saying that I did not think it would be necessary to see him again. I was sent for the next day, however, and was informed that the pain had returned and that the bowels had not moved, although he had taken two bottles of the solution of magnesia. The second examination revealed pulse 80, temperature 99°. Very firm and deep pressure over the right iliac fossa revealed slight tenderness, most marked at McBurney's point. The tenderness being so slight and the constitutional disturbance so very little, that, although appendicitis was suspected, a positive diagnosis was not ventured upon, and a palliative plan of treatment was adopted and further developments awaited. The patient was cautioned to remain in bed, and a liquid diet ordered; hot poultices were applied over the tender part, and twenty-minim doses of deodorized tincture of opium were administered for the relief of pain. This plan of treatment was continued for three days, during which time his temperature never rose above 100°, and his pulse remained from 90 to 95. The tenderness over the cæcum became very much less, and he expressed himself as being perfectly comfortable, and requested to be allowed to get out of bed. On the morning of the fourth day of his illness, the nurse informed me that he had passed a very comfortable night, but that almost as soon as he had awakened he had vomited. He had complained of no nausea, and his vomiting was projectile. On examination of the vomited matter, it was found to be a large quantity of a dark-greenish fluid; considerable distention of the abdomen was observed, but no tenderness, and he complained of no pain. The bowels were constipated, and the finger introduced into the rectum found it entirely empty, and no tumor could be felt in the right iliac region. The necessity for probable surgical interference was explained to the family, and a consultation suggested. Dr. S. Fleet Speir was called, and it was agreed that an attempt should be made to move the bowels, and, in the event of failure, that operation should be resorted to. Enemata of solutions of sulphate of magnesia in glycerine, ox-gall, etc., were

accordingly administered, and after several fruitless attempts the patient had a slight fecal movement. After this he appeared better; his pulse became less frequent, and his temperature became slightly lower; the iliac tenderness entirely disappeared, and he complained of no pain whatever. Shortly after this, however, the abdomen assumed a swollen appearance, particularly in the epigastric region, and the vomiting of spinach-green fluid returned. The countenance now assumed a pinched, anxious expression, and there was more or less clammy sweating. Dr. Speir again saw him, and the case being somewhat obscure, it was agreed that Dr. McBurney should be called. Dr. McBurney saw him at five o'clock in the afternoon of the fifth day. At that time his temperature was  $100^{\circ}$ , pulse 90; he complained of no pain whatever, and while his abdomen was somewhat swollen, the firmest pressure applied with the hand failed to elicit any tenderness. The obstinate constipation and vomiting still continued, but his mind was perfectly clear, and he expressed himself as feeling well enough to get up. After a very careful examination, Dr. McBurney thought he detected a small indurated point corresponding to the position of the appendix, and gave it as his opinion that the chances for a recovery remained in an operation. The patient was at once etherized, and in the presence of Drs. Speir, Clark, Little, Callender and myself, Dr. McBurney, with the assistance of Dr. Parker, of New York, performed laparotomy. The ordinary incision was made along the outer edge of the rectus muscle, and on opening the abdominal cavity, the appendix was found pointing upward and completely gangrenous. A recent plastic exudate was to be seen binding the lower portion of the ileum to the cæcum. These adhesions were carefully broken up, and the appendix, having been ligated, was amputated, the stump lightly touched with the galvano-cautery, and the wound packed with gauze and partly sutured, the antiseptic method being strictly adhered to throughout. The patient rallied very nicely from the operation; one or two small hypodermic injections of morphia were given for wound pain, and early the next morning an attempt was again made to move the bowels. Injections of a solution of sulphate of magnesia and glycerine were given, and, failing in this, small doses of Rochelle salts were administered by the mouth, but with negative results. About four o'clock in the afternoon the heart's action became rapid, intermittent and very weak; the abdomen became very much distended, and vomiting of large quantities of the dark-green fluid which has already been described became persistent. A long soft rubber tube was intro-

duced into the stomach, and after emptying it of its contents, the stomach was thoroughly washed out with warm water. Drs. McBurney and Lewis A. Stimson saw him at this time, and it was decided that the washing out of the stomach should be done as often as was necessary, and that champagne should be administered freely. These suggestions were carefully carried out, but all to no purpose. The pulse increased in frequency from hour to hour, in spite of the frequent administration of digitalis, strychnia and brandy, hypodermically. The patient now became delirious, and finally passed into a state of collapse, in which condition he remained until about midnight, when he died. Permission for an autopsy was requested, but refused.

This case seems to me to present many interesting features. In the first instance it serves to illustrate with what little constitutional disturbance a completely gangrenous condition of the appendix may be attended, thus proving conclusively how very unreliable at times the objective and subjective symptoms are in this class of disease, and that when these alone are relied upon for a diagnosis, how misleading they may be. Here was a patient with a temperature less than  $100^{\circ}$ , with a pulse less than 90, and of fairly good quality, with a perfectly clear mind, with no abdominal tenderness, and yet with a gangrenous appendix. Does not the history of this case plead for more reliable means of diagnosis?

In the words of McBurney: "We have reached a point where we can never be satisfied with the mortality that attends an expectant treatment. What we wish to accomplish in the treatment of appendicitis, is not to save half of our cases, nor four out of five, but all of them. And how is this end to be attained except by improved methods of diagnosis at the very earliest stages. I hope that I may never again go every day to visit a threatening case, waiting bashfully for the authority of a clearly defined general peritonitis before I dare take action."

And so, after suggesting early exploratory incision as a means of diagnosis, and pointing out with great clearness with what little danger it may be attended, he reports seven consecutive cases, all of which were the subject of laparotomy, and all of which made complete and rapid recoveries. I do not wish to be understood as assuming the position that cases presenting all the evidences of this disease do not spontaneously recover. I have seen one or two such cases, but with our present knowledge of the pathology, these recoveries must necessarily be unexpected, and, in almost every instance, are followed by recurring attacks. Furthermore,

these exceptional cases do not by any means make us feel comfortable in the face of the great mortality caused by so-called perityphlitis. Undoubtedly many cases die unrecognized, the cause of death being attributed to gastro-enteritis, general peritonitis, etc. Are we, then, justified in standing idly by, waiting for our patients to develop fatal symptoms before having the courage to operate? Is not the risk of an operation with our present knowledge of antiseptic abdominal surgery very much less than the risk of pursuing an expectant plan? Every word of literature which has been contributed upon the subject up to the present moment answers in the affirmative. Has not the time arrived when to pursue the old methods of treatment may be regarded as unskilful? I do not think there is a gentleman present who will question what the result of the operation in this case would have been could it have been performed earlier. It may be urged that the obscurity of the symptoms did not justify earlier operation; but I wish to be understood as believing that these obscure cases, above all others, should be subjected to early explorative incision in order that the parts may be carefully inspected.

And this brings me to a very interesting point in connection with this case, namely, the immediate cause of the fatal result. It was suggested by some of the gentlemen who were connected with the case that without an autopsy it could not be made entirely clear, that there may have been some obstruction at some other point in the small intestine which would account for the inability to move the bowels after the performance of the operation. I am firmly convinced, however, that this was one of those cases in which there was a general paresis of the entire intestinal canal, and that this paresis was due to sepsis from the gangrenous appendix. In a personal communication from Dr. McBurney on the subject, he informs me that he has seen several such cases, and in a conversation with Dr. George R. Fowler, I was gratified to learn that his experience would lead him to the same conclusion. In an article by Dr. Lewis A. Stimson, entitled "A Contribution to the Study of Appendicitis," published in the *New York Medical Journal*, October 25, 1890, he calls attention to this class of cases in the following words: "Death may occur through septicæmia after suppuration, or by a septicæmia that apparently originates in a functional obstruction of the intestine. Two of the four deaths in this list of cases were apparently due to this latter cause, and the conditions found on autopsy were striking. The small intestine was largely distended with liquid yellow contents down to a point within a few inches of the ilio-cæcal junction, with no



recognizable mechanical obstruction at the point where the distention ceased. "This condition," says Dr. Stimson, "has recently received the name of intestino-peritoneal septicæmia, against which, when it is fully developed, we seem to be at present powerless."

Why septicæmia should assume this form in one case and not in another is certainly a very difficult question. I am inclined to think with Dr. McBurney that some people become septic much more readily than others, and I feel sure that this idea will be sustained by our experience with other septic diseases. That this was the condition in this case there can be no question. The dark vomit, clammy sweat, septic look, feeble pulse, and the complete absence of all the distressing symptoms pointing to acute obstruction, stand out in proof of it. It is a condition which comes on insidiously, and is very misleading. With its advent in a given case, the acute symptoms subside, and the patient seems to be improving. If there has been pain, it subsides, and in its place comes a comfortable feeling, often accompanied by a reduction of temperature and pulse. This comfortable feeling is usually attended by early and painless distention of the abdomen, which is regarded by Dr. McBurney as a very fatal sign. "I have seen no case" (he says in a personal communication) "recover where this sign was well developed. It is another reason for operating at a time preceding the appearance of this complication."

Such cases as the one which I have just reported seem to me to support the statement that what we need are improved methods of diagnosis at the earliest stages, and that exploratory incision, with ocular inspection of the parts, is one upon which we must rely for accuracy.

CASE II.—About nine o'clock on Friday morning, March 14th, I was requested to visit Miss J. M., age twenty-four. She informed me that she had felt perfectly well up to the afternoon of the previous day; in fact, she stated that she felt in rather unusually good health and spirits, so much so that she had taken a much longer walk than was her custom. Arriving at her home about five o'clock, she complained of slight colicky pains in the abdomen, which compelled her to retire early. She took some paregoric, after which she slept a short time, but was awakened with a feeling of nausea, which ended in vomiting. After this she had a short chill, which was followed by chilly sensations of considerable duration. She spent a somewhat restless night, and the pain being no better in the morning, I was sent for. I found her in bed. An examination revealed pulse 110, temperature  $100\frac{1}{2}^{\circ}$ ,

respiration 22, and somewhat thoracic. Tenderness in the right iliac region quite prominent, particularly so at McBurney's point, and markedly increased on extension of the thigh. Examination per rectum revealed a negative result. A diagnosis of appendicitis was made, hot fomentations applied over the tender point, and twenty minim-doses, every two or three hours, of the deodorized tincture of opium ordered for the relief of pain. After the administration of three or four doses of opium, her temperature and pulse became normal. The next morning she informed me that she had experienced great relief after having taken the medicine, and had continued comfortable up to the early morning, but that having slept quite well, she had not taken the medicine through the night, and that the pain had returned. The temperature was now found to be  $101^{\circ}$ , pulse 120, respiration 24, and tenderness less circumscribed. The gravity of her condition was communicated to her immediate relatives, the probable necessity for operative interference explained, and a consultation suggested. Drs. George R. Fowler and Benjamin F. Westbrook saw her in the evening and confirmed the diagnosis of appendicitis; but, owing to the lateness of the hour and the comfortable condition of the patient, it was finally decided to move the bowels with small doses of calomel, in the hope that her condition might be improved thereby, and await the result. Her bowels were moved quite thoroughly the next morning, but her condition not only did not improve, but became rather worse, the tenderness extending and the pain increasing in severity. After a second consultation, the opinion was unanimous in favor of surgical interference, and laparotomy was performed by Dr. Fowler, assisted by Drs. Delatour and B. F. Westbrook. An incision about five inches long was made upon the outer edge of the rectus muscle. Upon opening the peritonæum a portion of the distended and congested intestine was seen to crowd itself into the opening. This being pushed aside, revealed the underlying intestine more or less covered with recent plastic exudate. The separation of the folds of the intestine in the search for the appendix caused a very slight flow of pus, which was quickly sponged away by Dr. Delatour. After the separation was completed, the appendix could be seen pointing downward from the direction of its cæcal attachment, and presenting a decidedly swollen and gangrenous appearance. On further examination it was found to be adherent to a fold of the ileum for its entire length. After careful isolation of the parts with gauze in the hands of his assistant, Dr. Fowler proceeded to pass a silk ligature around the base of the appendix. During this

procedure the appendix was discovered to be perforated in several places, through one of which passed a very small, hard piece of fæcal matter, which was at once removed. After carefully ligating the appendix, it was amputated, and the parts carefully sponged with a biniodide solution. A glass drainage-tube was placed against the stump, and after carefully packing the wound with zinc gauze, it was partially closed by suture and covered with more gauze, after which a bandage was applied. The patient rallied nicely from the effect of the operation, and made a complete recovery, and is now enjoying excellent health.

In referring to this case, Dr. Fowler says: "This case is reported as an instance in which an exceedingly bright and useful member of society was snatched from the very jaws of death by a timely operation."

Time will not admit of a complete history of her convalescence, but there was one feature of it which is so closely related to the question of early operation as to be particularly interesting. The case was an extremely anxious one for all concerned; and when on the fourth day following the operation the temperature and pulse were found to be normal, the patient taking her nourishment kindly, not having had an untoward symptom and the wound doing admirably, it was not consoling, to say the least, to find that a sudden rise of temperature and the onset of a parotitis suggested septicæmia. The question at once arose as to the probable cause. Dr. Fowler was in constant surgical attendance, and ventured a positive opinion that the mischief did not arise from the condition of the wound. Careful and repeated examinations of the several organs were made by both Dr. Westbrook and myself in the hope that the source of the sepsis could be discovered, but with negative results. As the case progressed and the temperature varied from  $100^{\circ}$  to  $102^{\circ}$ , accompanied by an occasional chill, together with a recurring parotitis, we were constantly in the face of the supposition that we were dealing with septic infection, the cause of which did not seem to be discoverable. This uncertainty was the cause of much anxiety, and the apparent septic element protracted a convalescence which would otherwise have been uncomplicated. The parotid gland did not suppurate at any time, but after the swelling had entirely subsided, the temperature remained as before, and continued above the normal for about six weeks. Was this condition one of mild septicæmia? I am somewhat doubtful; but I am inclined to think it was not. She was extremely neurotic, and, consequently, very susceptible to external impressions. The receipt of unpleasant news, the introduction of

the finger in the rectum for the purpose of ascertaining its condition, or an anticipated examination by the physician, would send the temperature up from one to two degrees, and considerably accelerate the pulse. Movement of the patient during convalescence from one bed to another, although done with great care, would produce chilly sensations, and on one occasion a distinct chill, which lasted twenty minutes. If it had been septic, would not the parotid gland have suppurated, and would she not have had other septic manifestations? If the condition was septic, the only possible source was the gangrenous appendix. Is it possible that enough septic material could have been taken up by the lymphatics before the gangrenous appendix was removed, and have shown itself in this manner? If it is conceded that this patient was suffering from septicæmia and that the source was the gangrenous appendix, it would be a point in favor of the earliest possible moment for operation, in order that the appendix might be removed before it could supply this septic element. The condition of the appendix in this case proved that it requires only a very short attack of inflammation to completely destroy its structure, and also that the patient would have been running much less risk had the operation been performed twenty-four hours earlier. Furthermore, if an operation of this kind is done sufficiently early, there is no reason why in some cases the wound should not be immediately closed, thus preventing a more or less tedious convalescence.

CASE III.—G. G., age eleven years, was perfectly well up to the morning of November 14, 1890. At that time he was seized with colicky pains and vomiting. He went to a neighboring druggist, who informed him that his stomach was out of order, and prescribed various medicines for his relief. The vomiting and pain continued, however, until Sunday evening, the 16th, when I was requested to see him. I found him dressed and sitting in a chair with his head bent forward and his thighs flexed on his abdomen. His countenance was anxious, and he complained of abdominal pain. On examination I found his pulse 120, temperature 101°. After ordering him to be put to bed, I proceeded to make a careful examination. He was suffering so much pain, and the tenderness was spread so thoroughly over the abdomen, that a positive diagnosis could not be made, although I strongly suspected the appendix to be the seat of trouble. Digital examination of the rectum found it empty, and no tumor could be felt in the right iliac fossa. Deodorized tincture of opium in full doses was administered for the relief of pain, and hot applications

were applied over the abdomen. Enough opium was administered every two or three hours to keep his respiration at about 14, and in this way he was kept comfortable. Daily examinations were made of the right iliac region, and on the following Sunday, the 23d, the percussion note was found to be flat, and pressure revealed marked tenderness at the McBurney point. Operation was at once suggested, and after consultation with Dr. Fowler, the patient was removed to the Methodist Episcopal Hospital. The operation was performed the next day by Dr. Fowler in the presence of Dr. Pilcher and the house staff. The usual incision was made, and a large quantity of foul-smelling pus was evacuated. The finger, introduced in the wound, discovered the appendix lying in the abscess cavity. Further interference was not considered advisable, and a drain was inserted and the wound dressed in the ordinary manner. The next day his temperature was normal. He made an uninterrupted recovery, and left the hospital December 15th, with a small, flat, granulating surface situated in the centre of the wound, which is now entirely healed.

This case is typical of a class which are frequently mistaken for gastro-enteritis, idiopathic peritonitis, etc., and illustrates how perfectly easy a mistake in the diagnosis may be made. There was nothing in the history of it to point particularly to the appendix. I have no doubt that pain was more or less prominent in the right iliac region some time during the first twenty-four or forty-eight hours, but it spread so rapidly that the patient, being very young, could not give an intelligent account of it. It is hardly necessary for me to point out the advantage which would have resulted could the diagnosis have been made earlier. Had he been seen during the first twenty-four or forty-eight hours and an early diagnosis made, the operation would have resulted in a removal of the appendix, thus leaving the patient free from the possibility of recurring attacks.

I had intended to dwell with greater length on the symptoms which characterize this affection in its early stages, but time will not admit of it. I cannot close my remarks, however, without special reference to that symptom which may now be regarded as pathognomonic and which is being spoken of as the McBurney point. In demonstrating it, Dr. McBurney has rendered the profession a service which cannot be spoken of too highly, and I prefer to quote from his article on this particular point:

“The exact locality of the greatest sensitiveness to pressure has seemed to me to be usually one of importance. Whatever may be the position of the healthy appendix as found in the Dead

House—and I am well aware that its position when uninflamed varies greatly—I have found in all of my operations that it lay, either thickened, shortened or adherent, very close to its point of attachment to the cæcum. This, of course, must in early stages of the disease determine the seat of the greatest point of pressure. I believe that in every case the seat of the greatest pain, determined by the pressure of one finger, has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus.”

As far as I have been able to find, there is yet to be an error in diagnosis reported, although many operations have been done in which this question has been tested. In Dr. Stimson's paper he reports five cases, in every one of which this symptom was prominent. All five were subjected to early operations, and all made rapid and uninterrupted recoveries.

Finally, I beg permission to present the following conclusions :

First. That inflammatory action in the region of the cæcum has, in almost every instance, its origin in the vermiform appendix.

Second. That the terms perityphlitis and paratyphlitis, as applied to this condition, are not only confusing but misleading, and their use in this connection should be discontinued, and a term expressive of the existing condition substituted.

Third. That a certain number of these cases will go on to early resolution, but that they are subject to recurring attacks.

Fourth. That the vast majority of the cases seriously endanger life, and that, therefore, all cases should be considered with a view to early surgical interference.

Fifth. As we have no means of distinguishing those cases which will go on to the formation of an abscess without accident from those which will result in resolution, early laparotomy should be resorted to in doubtful cases, in order that by ocular inspection of the parts a correct diagnosis may be made.

Sixth. That if, at the end of twenty-four or forty-eight hours there are evidences of advancing disease, surgical interference should be resorted to in all cases.

#### DISCUSSION.

The President introduced Dr. Charles McBurney, of New York, who opened the discussion as follows :

Dr. McBurney.—I should like, in the first place, Mr. President, to thank the Society very warmly for the opportunity afforded me

to be present here this evening. I have enjoyed the reading of the paper very much indeed. I feel that it is unfortunate, however, for me that I am unable to lend a special point to the discussion by differing from the writer of the paper. Differing from and bringing forward opposite views from the writer of the paper is interesting, as was shown by the discussion we have just heard, which finally ended in agreement, and that I believe would be the result after hearing the views of different men on this subject which Dr. Cruikshank has brought before us.

It is a great relief to me to hear a medical man come out fairly and squarely in reference to some direct, distinct and definite treatment of an obscure disease that many practitioners have been satisfied to treat very indirectly for years; for it is surprising, in studying the history of medicine and surgery, to find that a disease which is so highly interesting, which is so serious, which has killed so many, should have failed, until within a very few years, to reach anything like a rational position in the way of appreciation on the part of the profession. That we should have gone on all these years and allowed a gangrenous appendix to remain in the peritoneal cavity and a half pint of pus undisturbed to fight its way to the front, is a curious thing in medical history. Why were we so long in recognizing a disease which evidently needs so much treatment in a great many cases, and which ought to be appreciated fully in the earlier stages? I suppose the reason was because we adhered, in the treatment of all abdominal troubles, to the general doctrine that held sway so long, which denounced interfering in any way with the peritoneal cavity, and yet that doctrine seemed to be more especially applied to the appendix. Nearly everything else—the tubes, ovaries, uterus, intestines, kidneys—were operated upon directly, but the little appendix was allowed to suffer and become gangrenous until very recently. A great deal has been learned about appendicitis within the last few years; and yet, Mr. President, we have a great deal more to learn about it. A year ago, at a meeting of the Surgical Society—there having then been a considerable number of specimens presented of diseased appendices, with histories of cases and stories of operations—one of the members said to me, on hearing another member present a specimen: “I move that if the word appendicitis is uttered in this Society again we club the man out of the place.” That implied, of course, that we had covered the ground; but we are far from it, and I would like to raise the question, because it is one that is interesting to all of us: What is the mortality from appendicitis? I am sure I do not know. I have argued that perhaps twenty-five

per cent. of cases of appendicitis die; but that does not begin to cover the ground. These statistics are not based on accurate information. The truth is that the evidence that is given to us is of the most unreliable and varying kind. I have met practitioners of large experience who have told me that they had never met with a case that was fatal. Now, when you take such statements as that and try to get at the mortality of appendicitis, it is a very difficult thing to do. I do not know any way to get at it except to inspect very closely every case of peritonitis as possibly connected with appendicitis. I feel, myself, that it is not easy to put it in figures, but I believe that the very large majority of cases of peritonitis which occur in the male subject and a very large number in the female subject are due to disease of the vermiform appendix. I believe a great many cases of peritonitis whose origin is not recognized begin in disease of the vermiform appendix. I am sure that this is the case, because I have long since had my attention called to this subject at autopsies on patients treated for peritonitis, the original cause of the disease—that is, appendicitis—having been unsuspected until the autopsy revealed it.

It seems to me that it would be well worth while for those of us who are interested in the subject to study and look carefully into the causes of peritonitis as they appear in the death records; I think we would thus get some valuable information on that point. It would be a good thing to discover how often we find male subjects dying of peritonitis originating in any other cause than appendicitis. We could easily throw out wounds of the abdomen, contusions of the abdomen and ulcerations of the stomach, and we should finally bring down the whole set of causes of peritonitis occurring in the male subject to a pretty definite state, and we should find there was rarely other cause for these deaths than disease of the vermiform appendix, and we should then begin to get at the mortality caused by the disease. But it is at present difficult to form a definite estimate of the mortality from appendicitis. I do believe, however, that the mortality from the disease is very large.

I agree so thoroughly with Dr. Cruikshank in what he has said that it has seemed to me best to take up one or two points of interest and dwell upon those. In the first place, there is no question, I should think, but that any collection of medical and surgical men would be agreed entirely upon one point, namely, that in treating patients affected with this or any other disease, their main object would be to save the patient, and not only to save the patient, but to accomplish this in the most complete manner and to obtain the most perfect result. We should all be agreed upon that.



The only question which can arise, or which ought to arise, would be as to the means which should be employed—whether we should depend upon medical means, or whether we should depend on surgical means; and I take it there are no surgeons who are so bloodthirsty that they would insist on cutting every single individual affected with inflammation of the appendix as a necessary means to cure, and I am sure that there is no physician who would absolutely and positively refuse to have any surgery done to his patients until they were at death's door. But between those two extremes we have the most troublesome cases, and the very question arising between the extremes is the most difficult to decide: when have we a case which we can treat medically, and which case must we begin to look at from a surgical standpoint?

I have been asked several times to express my views on that point briefly. I cannot express those views briefly, for the reason that cases differ so much from one another, and it is certainly one of the interesting features of the disease, and one that has kept us in doubt for so long a time, that we meet with such variety of symptoms and such varied collections of symptoms and such an extraordinary variety in the pathological results produced by the disease. We perhaps meet with a case with few symptoms of illness, and we make a diagnosis of appendicitis. That patient dies. When we look back over the history of the case, we find that at no time has the temperature been over  $100^{\circ}$ , that the patient looked well until near death, but suddenly died of sepsis, and such cases are often absolutely hopeless for treatment after a very short time. It is therefore to the early diagnosis of these cases that our attention should be most strongly directed, and the early diagnosis is in my opinion not difficult. It seems to me that to separate this disease from diseases of the ovary, tubes and kidney is not a difficult affair. The many descriptions of the disease are sufficiently clear and quite accurate enough to make a definite diagnosis possible in ninety-nine out of one hundred cases.

Now, the diagnosis having been made, a great thing is accomplished; and it is there, in not making the diagnosis, that most mistakes are made. Doubtful cases receive no treatment whatever for the cause of the disease until much valuable time has been lost; then the question is raised. It seems to me that, as in all other cases of disease, medical and surgical of all kinds, the early appreciation of what we have to deal with is of the utmost importance. If we do not make an early diagnosis, we blunder along, giving opium and all sorts of medication, until finally we appreciate that the patient is nearly dead, and then we call in a surgeon, who says

that operation gives the only chance (we know pretty well there is no chance under those circumstances); the operation is done, and the patient dies. The result in these cases is generally put down as against surgery.

Now, I think perhaps we have not given attention enough in looking at the subject from the point of view of the special case.

It is easy enough to talk about temperatures, pulses and the disease in general and its various symptoms and lesions, but that is not what troubles us individually: it is the individual case that troubles us. When we come to the case of a young and healthy boy or girl and we recognize that he or she has inflammation which we diagnose as inflammation of the vermiform appendix, what are we to do? Perhaps we have never seen such a case, or we may have seen a dozen, many of them having recovered; nevertheless that is the very time when we are to discuss the treatment of the case from both a medical and surgical standpoint. My own belief about the matter is that some of the questions have been already settled for us by experience. Years ago it was absolutely justifiable for reasonable men to say that there was greater danger in operation than there was in leaving the disease alone, but certainly that answer could not be made to-day. The danger of the operation is not great; in fact, there are many reasons why it should be small, and though they have not been appreciated in the past, they are now being appreciated to a greater extent. The reasons why the dangers are not very great where the operation is done early are numerous. In the first place, the patients are almost all young, very few over thirty years of age—rarely over forty—which is a good operating age for any case, except in specially debilitated patients. These patients are taken with the disease in health; you have a subject that is good to work upon, and that is a great advantage in the operation. If the disease is appreciated at an early point, then, and you start with a young subject and one who has been perfectly well up to the time you see him, you are pretty certain that there exists a better condition for operation than in almost any of the surgical emergencies that arise. These are very great advantages to start with in the performance of the early operation in this disease.

In reference to the operation itself, a great deal may be said that perhaps would not be entirely approved of by those not familiar with the operation. It is often assumed that interference with the peritoneal cavity—particularly where inflammation has begun—is necessarily a very dangerous affair, and the usual assumption is that if an inflamed appendix is exposed, the perito-

næum being opened and intestines handled, the danger of sepsis being conveyed by the surgeon from the seat of operation to the non-inflamed peritonæum is very great. That would seem to be the case at first sight; practically, however, it is not so. Experience has answered the question already in the negative: The danger is not great. I am sure that this is so, for this reason: that in a great many operations which I have seen, in every one of them done at an early stage, it is unavoidable that the intestines should be handled. Sometimes the intestines come out on the wall of the abdomen, and you may have to press them aside; you may have to take out the colon to find the appendix—in fact, you do a great deal of handling to the intestines and peritonæum. Is it true that in such cases the peritonæum readily becomes infected? It does not become infected, or the cases where such infection occurs are very rare. I have not seen *one* myself in which the operation was done at the early stage where the patient afterward died from sepsis obtained in that manner. This shows, then, that the danger of sepsis being conveyed to the non-involved peritonæum in the operation is slight. I think that can be explained, and the explanation is one that applies to suppurative inflammations all over the body. When the operation is done, when an opening is made into the region which contains the inflamed and diseased tissue or material, whether it be pus or gangrenous material, when a free vent is given, tension is relieved and absorption ceases. You have an abscess in the thigh; you have found the patient with a temperature of  $104^{\circ}$  and suffering great distress. Why does he suffer in that manner? Because pus under tension in the thigh is being absorbed; but you make an incision and relieve the tension, and the absorption immediately ceases and the temperature will fall to the normal standard in a few hours. The same explanation applies to operations for the relief of symptoms produced by pus in the neighborhood of the appendix. You relieve the tension, get rid of the septic material and stop the absorption going on in the neighborhood, and the patient immediately begins to feel better, and that is the history of all cases operated on in the early stage; the temperature will fall, the vomiting cease, and often the symptoms will disappear within five or six hours.

Now, Mr. President, not to occupy the Society too long, I would say that medical men must do the surgeons at least the justice to exclude, as having a special bearing upon this subject, all those operations done at the late stages of the disease. I do not mean that all the operations done at the late stages are dangerous or serious ones; they are not, for many of them are mere incisions

into an abscess. I mean to say that it should not be thrown up against the surgeons if the patient dies, when an operation is done, simply because all other modes of treatment have been exhausted. Such cases should not be operated on, because they are hopeless, and the result in such cases should not influence our position on the question of early operation.

But to come back again to the special case. We have made the diagnosis: the patient has a temperature of  $101^{\circ}$  to  $102^{\circ}$ , with vomiting, with considerable abdominal pain, and the question arises, what shall we do? Shall we wait because a great many cases get well if we wait, or shall we not do something definite and put an end to all risk? That is the practical question that comes to us every day. My own feeling is this: Knowing that the deaths take place from certain causes, either perforation of the appendix, rupture of an abscess, or sepsis, either one or the other and sometimes all three, and knowing that the deaths often occur at early periods in the disease—many within the first five days where the disease is rapid—knowing these facts, we should endeavor to time our operation so as to *anticipate* the condition that is going to destroy life.

In looking over the statistics of this disease, as given by Fitz, we find that out of 176 cases of perforation of the appendix some 60 died within five days. Now, from these statistics has been drawn the conclusion by a number of writers that we should operate on or before the fifth day. That was a very narrow conclusion to come to. What we should try to destroy is the pathological process which kills the patient. If that process begins on the second day, then it is time for us to operate on the first day. It is no satisfaction to know that one patient can stand sepsis five days and another only two days. The question in any particular case is, what process is going on there now, and is any process beginning which is liable to lead to death? Therefore I say such time for operation should be selected as will allow us, if possible, to anticipate the time for the full development of the process that is going to kill. Patients will begin this process sometimes within the first twenty-four hours or even within the first twelve hours, and sometimes it does not begin until the fourth day; therefore we must make an early diagnosis and study each particular case, and endeavor to see just how far the disease has progressed. The large majority of cases will recover from the first attack without abscess and without operation. Nevertheless, there are so many patients that do not recover in that manner, that every one of the cases deserves very close consideration.

My own feeling about the matter is, that as experience has shown the radical operation to be comparatively free from danger; still more, as experience has shown that the mere incision which will determine the condition of the vermiform appendix and neighboring peritonæum is nearly completely free from danger—we have reached a point where we are called upon in doubtful cases to at least make the incision necessary in doubtful cases, to ascertain what the pathological condition actually is. That is not an unreasonable proposition to-day. Should the appendix be found in an active state of disease, it should be at once removed and the disease put an end to.

Dr. FOWLER.—In following up Dr. McBurney's remarks, I desire to call attention to the fact that on October 20, 1885, now nearly five and a half years ago, I stood before this Society, and as the chairman of the Surgical Committee delivered an address upon the subject of "Explorative Laparotomy." In the course of that address I took occasion to call attention to the class of cases under discussion this evening. If you will permit me to do so, I will quote that portion of my remarks bearing upon the question of early interference in appendicitis:<sup>1</sup>

"In like manner [by an exploratory incision] can be definitely diagnosed diseased condition of the vermiform appendix, perforations, etc. In these cases, in which the diagnosis is only tolerably certain, ligature, or Lembert's suture above the seat of disease or perforation, and a removal of this apparently useless portion of the alimentary canal, would then be indicated. It is no argument against explorative laparotomy in this class of cases to say that the adhesions limiting and walling in the seat of perforation and extravasation of fecal matter would thereby be prevented from forming. An appeal to the statistics of peri- and para-typhlitis will reveal with what comparative rarity these adhesions occur. When these do take place, the patient is still exposed to the danger following their rupture when abscess forms; when they do not form at once, oftentimes perforation, diffuse peritonitis, and, in consequence, certain death is the rule. Here, then, is a class of cases in which the operation under consideration will, I venture to predict, prove the means of saving many lives."

The assertion made upon that occasion, and the prediction ventured upon, I am happy to say have been more than justified and fulfilled by the accumulated experience of surgeons since that time. Thanks to our honored guest of this evening, Dr. Chas. McBurney,

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<sup>1</sup> New York Medical Journal, vol. xliii., p. 3.

who, together with Weir, of New York, and others who have demonstrated that true conservatism in this, as well as in other abdominal pathological conditions, consists in the adoption of radical measures, the surgeon of to-day will find ample moral support when, as the responsibility for the patient's welfare is shifted from the shoulders of the medical attendant to his, he decides that laparotomy, and this alone, will put him into possession of all of the knowledge requisite to snatch the patient from his impending doom, and open at the same time the door by which he is to escape.

In advocating the employment of early laparotomy in appendicitis, for the purpose of removal of the appendix when possible, and in any event to open up the way to the ready escape of pus or extravasated fecal matter, or both, by a judicious application of the method of protecting the peritoneal cavity by tamponing, or packing with iodoform or other gauze, I am aware that many medical practitioners will look upon the procedure as one of excessive boldness and perhaps unjustifiable temerity. I am thankful to Dr. Cruikshank, the reader of the paper of the evening, for having furnished me with one of the cases in which I was enabled to demonstrate the untenable character of this assumption, as shown by his very excellent description of the progress of the patient to recovery after operation. I do not desire to be understood as asserting that the early operative interference as practiced by myself was sufficient in itself to have saved alone this particular case—no one knows better than myself what unremitting care and faithful service he rendered in the after care of the patient; but I do know, as far as it is given mortal to know anything in this world not a demonstrated fact, that, had not the abdomen been opened and the appendix removed at the very moment that this was done, or had she not fallen into the hands of a medical attendant, in the very commencement of her symptoms, who was fully alive to all of the exigencies of the case, and who was not only willing, but anxious, to have her given the benefit of prompt succor, there would have been a very different termination of the case.

The profession and the world are under lasting obligations to Dr. McBurney for having called attention to an objective sign, the presence of which, early in the case, will open the way for a more positive interpretation of the subjective symptoms, a more precise diagnosis and the adoption of a more typical and formal operative interference. I refer to the point—tenderness in the right iliac region. The presence of this sign in an otherwise doubtful case will add confidence to the operator in his decision to seek at

once for the appendix itself; and there can be no manner of doubt, in my own mind at least, that it is almost criminal, in view of the experience of the last few years, for any surgeon to disregard the indications plainly present when this symptom exists, in conjunction with others, perhaps less positive, but nevertheless worthy of attention.

There is a class of cases, fortunately rare, in which we may not avail ourselves of this sign. I refer now to anatomical abnormalities referable to the appendix and its location. It has been my misfortune to meet with a case belonging to this class. The history of the case is, briefly, as follows:

On December 12, 1890, I was asked to see Mrs. N., aged 28, who was suffering from colicky pains referable to the region of the umbilicus. The patient herself had a dread of appendicitis, having lost an acquaintance with the disease whose life might have been saved, as she was informed, by a timely operation. Hence her reason for summoning myself. The patient's temperature was below  $100^{\circ}$  and her pulse but 80. The pains were simply those of ordinary colic, and there were no evidences present of even a mild peritonitis. Pressure with the point of the finger in the right iliac region, as well as in other regions, gave but negative results. In a few hours, under the influence of a small dose of morphia, all the symptoms improved save a slight increase of elevation of temperature. Repeated examination of the abdomen failed to locate tenderness in the right iliac fossa; in fact, the patient averred that, although there was but little tenderness anywhere, yet, if there was any difference anywhere, it was in favor of the left side. The mildness of the case and the absence of any characteristic symptom quieted my first suspicions, and I assured the patient that her fears were groundless. Imagine my surprise, however, on the afternoon of the day following the commencement of the attack—the patient in the meanwhile having been perfectly comfortable—at being hastily summoned to her bedside. I found her in a state of collapse, with drawn features, violent abdominal pain, cold, clammy skin, and short, superficial and rapid respirations. The pulse was 165, feeble and thready. A perfect picture of perforation of some portion of the intestinal canal was presented to me; and no time was lost in attempting to rally the patient sufficiently to warrant me in opening the abdomen. I had the benefit of the counsel of my friends Drs. Pilcher and Jewett; but it was decided that the patient's condition was such as would not justify any operative interference. She never rallied from the shock of the onset of the severe symptoms above detailed.

The autopsy, made by Dr. J. M. Van Cott, Jr., revealed a most extraordinary state of affairs. The appendix vermiformis was found imbedded in some partially adherent inflammatory new-formation tissue, together with the caput coli, directly beneath the left rectus muscle, and about at the height of the umbilicus. Its abnormal position was due to an extremely short meso-colon.

It was very evident that in this case a reasonable excuse existed for the failure to make a diagnosis. The remarkably rapid course of the disease, in former times, even with all the typical symptoms present, would have constituted a sufficiently redeeming feature to have relieved the surgeon from responsibility for the fatal issue. In the light which has been thrown upon these cases recently by competent observers, however, this can have no part in an apology for permitting this patient to die without the benefit of an operation designed for her relief. She perished simply and solely because of an abnormally located appendix. The case only emphasizes the importance of bearing in mind the fact that such abnormalities may occur, and that the surgeon, upon opening the abdomen in doubtful cases, should be prepared to encounter the most diverse conditions.

Referring to the last case by Dr. Cruikshank, I want to call attention to the fact that the abdominal cavity itself was not invaded. I make this statement because of the fact, as stated by him, that the vermiform appendix was not removed. It was imbedded in a mass of new-formation tissue, the attempt to break up which and remove the appendix would have been fraught with the greatest danger. I laid great stress upon this subject in my previous remarks, and I only desire to emphasize it now in order that there may be no unjust criticism on that portion of the operation as described by Dr. Cruikshank. The peritoneal cavity was not invaded; the incision was made in such a manner that the very centre of the tumor was reached, opened up and the pus evacuated. Although I could distinctly feel a rigid line at the upper and outer portion of the abscess cavity, yet in my judgment it would have been entirely unjustifiable to attempt its removal.

In closing, I will venture another prediction, to wit: The day will surely come when pathological intra-abdominal conditions, whether inflammatory or otherwise, requiring any but the most tentative or purely medical treatment, will be placed in the hands of the surgeon for laparotomy, explorative or curative; and that nothing short of a reasonably well-grounded fear that the patient will perish upon the operating-table will deter the surgeon, under



these circumstances, from giving the patient the benefit of a positive diagnosis and the possibility of relief.

Dr. RAND.—The difficulty of determining the existence of an appendicitis, judging from the tenor of the remarks made here to-night, and from my own experience, is much less than that of determining the degree of an appendicitis, and of deciding whether the case can be safely trusted to medical treatment, or whether laparotomy should be performed. Bearing upon this question, I recently met with a case which showed particularly well the difficulties of estimating, prior to operation, the danger in which the patient may be placed by his diseased appendix. The threatening symptoms may be due to some other cause not hitherto suspected, as occurred in this case, which I saw with Drs. Skene and Dickinson. The patient had been sick for five days. The history was that of appendicitis, but all his symptoms had improved so much that we felt justified in advising delay. He continued to improve until the following afternoon, when he was suddenly seized, while turning upon his side, with a severe pain in the right iliac region, which was speedily followed by symptoms of profound shock. The rectal temperature fell to  $96.5^{\circ}$ . Shortly afterward there was a marked increase in the abdominal distention. The history of the case made it highly probable that perforation had occurred, and such a diagnosis was made. Laparotomy was done as soon as possible. When the abdominal incision was completed, the cæcum, greatly distended, rolled out of the wound. At several points upon its anterior surface there was evidence of recently ruptured adhesions. There was no general peritonitis. The appendix was easily found. It was rigid, distended and inflamed, but there was no perforation. It was removed, and on section its mucous coat was found to be the seat of several superficially ulcerated points, and a deep ulcer existed near the apex extending almost through to the peritoneal covering. Its condition was clearly such as to justify the operation, but it did not explain the alarming symptoms which led us to suspect perforation. They may have been due to rupture of some of the adhesions between the cæcum and the parietal peritonæum.

I agree, in the main, with what has been said as to the merits of early laparotomy in these cases; but our patients do not want to be subjected to unnecessary operation, and if, by a careful record of all such cases as come under the observation of both physicians and surgeons, more definite rules can be formulated for our guidance, a much-to-be-desired object will be attained.

Dr. FIGUEIRA.—I believe all cases of inflammation in the right iliac fossa due to inflammation of the vermiform appendix can be grouped under three heads: A mild form of the disease which is not always due to appendicitis. This is the form of disease which general practitioners see and which they claim gets well. I believe that ulceration of the cæcum will in some cases approach the surface and raise a localized peritonitis; the symptoms evidently are not due to appendicitis. These cases get well without abscess. If they were due to perforation, they would not get well in that way. I believe these cases are due to ulceration of the cæcum, extending to the surface of the bowel and producing peritonitis, and that in time and under proper treatment they get well. There is another class of cases due to perforation of the appendix in which adhesions take place; circumscribed abscess in the right iliac fossa forms, if time is given by nature to wall in a space into which the perforation takes place. Then there is another class of cases where the perforation takes place into the general peritoneal cavity.

Now, is there any means by which the diagnosis of these three classes of cases can be made? The severity of the symptoms is of importance in the diagnosis. There is one point of importance—the presence of tumor, from the start well marked and defined, with moderate symptoms; if the symptoms are mild and the tumor well marked, I think, with careful supervision, it is safe to wait. In the other class of cases, where the abscess forms through perforation and is walled in, the symptoms are generally more marked and the temperature is higher, and then, on examination of the tumor through the rectum, we find present resistance on the roof of the pelvis. These are the cases in which early operation is required, because of the danger of perforation into the peritonæum. In the other class of cases no walling of the abscess exists. I would consider Dr. Cruikshank's case in this class. The history of sudden pain with vomiting and collapse, when we find the patient in good condition, is very suspicious. It is the early history that often points the way the patient is going. If there is a history of sudden pain and collapse and vomiting, then it is our duty to look very carefully and to examine with a great deal of care, because these are obscure cases that when they manifest themselves are beyond the reach of the surgeon. I fully agree with the gentleman, that when there is any doubt, laparotomy should be performed.

Dr. PILCHER.—The intense interest manifested by the gentlemen present is indicated by their remaining until this late hour in this close atmosphere, and I would not transgress upon their patience

were it not for this fact that the attitude which I have held in this matter during the time that this discussion has been raging has been one of recognized conservatism. In the consultations which I have had the honor to take part in, in various cases, as a rule my voice has been for a conservative course, and that has been based upon two things: First, my own experience in the general tendency of these cases to recover without operation; second, from my dread of the possible dangers connected with operative interference. It has been my fortune to see quite a number of cases during the past fifteen or eighteen years, in Brooklyn, that were unmistakably cases of inflammation of the vermiform appendix, many of them accompanied with perforation, doubtless, and resulting in abscesses, and until very recently I thought that I was unable to score a single death from among them. In various ways they have progressed, many of them through a long history and very narrow escapes, but all of them to recovery. In looking back over my experience, however, I think I can find now one or two cases which were undoubtedly cases of inflammation of the vermiform appendix, but which were classed as general peritonitis, and which died. So that the mortality of appendix inflammations in my own experience is not as small, I believe now, as I thought it was when I first began to review it a few months ago. But as time has passed on, additional light has been given to us as to the pathology of these appendix attacks, and certainly additional knowledge of the best method of carrying on the technique of operative interference has been gained by us, so that at the present moment I feel very much less conservative than I did a year ago.

The amount of experience which has been gained during the past two years, especially since the time of the first paper at length on the subject by Dr. McBurney, as read before the New York Surgical Society, has given us an entirely new amount of material from which to form our judgment. Almost our entire exact knowledge of the pathology of appendicitis has been gained during the past twelve or eighteen months, and we find evidence now that these so-called typhlitic attacks have their origin as an inflammation within the peritoneal cavity, and we appreciate more clearly, I think, than ever before the different classes which exist. A very large proportion of the cases of appendicitis have heretofore failed to be recognized by us. If I mistake not, some recent observer has given us some figures and results of post-mortem examinations, in which a very large portion of all the appendices that were examined were found to exhibit traces of existing disease, one in three.

Of the one hundred and fifty gentlemen present here, it would be evident that over fifty of them have at the present time, or have had, or will have before they die, disease of the vermiform appendix. Now, this simply shows that there are different degrees of disease of the vermiform appendix. We see many cases which tend to spontaneous recovery going on continually under our eyes, many of them looked upon as simply an intestinal disturbance of but little moment, or an attack of diarrhoea or biliousness, when really it is some trouble with the appendix; a very considerable proportion of the cases, which we have recognized and under treatment have gone on to spontaneous recovery, have belonged to the class in which there is tumefaction of the appendix from temporary occlusion of the communication between the cavity of the appendix and the cæcum, so that secretions have been dammed up within it; the tumor and tenderness, which are well recognized, are an indication of the trouble there; but these cases come and go, and they get well and pass off. These are the ordinarily recognized conditions of perityphlitis.

Then, on the other hand, there are cases of such imminent danger and marked symptoms, that the necessity for immediate surgical interference, if anything whatever can be done for them, is recognized by all. These cases are not doubtful. Then between these is the class of cases over which the battle is raged. The distinction has been made in the remarks of Dr. McBurney between the simple cases over which there is no discussion and those which are doubtful, and the doubtful cases are the ones which we are to consider. Our thought to-night is to be narrowed down simply as to whether it is a desirable thing, as a rule, within the first two or three days after the development of a case which we feel to be doubtful, to institute operative interference. The question for us to consider to-night is that of early operative interference in cases of appendicitis, and this is limited simply to this doubtful group of cases. I take it that the question will narrow itself down very largely to our personal confidence in the safety of exploratory laparotomy. Quite a portion of these cases will go on to recovery, another portion will go on to death, and another portion will remain for an indefinite period of time between recovery and death; so whether we shall, at an early period, before they lose their doubtful character, make an exploratory incision, would depend entirely on our confidence in our ability, or the ability of the surgeon called in consultation, to make this exploratory laparotomy without adding additional dangers to the patient. Experience during the past year has shown that those gentlemen who have

experience in abdominal work are able to make an exploratory laparotomy and add but very little, if any, to the dangers under which our patient is laboring. I am frank to say that at the present time I look at the matter in this light, that whenever we are in doubt as to whether the case is serious or not, if we can command the services of one skilled in abdominal work, it would be proper, justifiable and desirable that an exploratory laparotomy should be done. We ought not to lose sight of this fact, likewise, that cases that get well to-day may recur later, and that when they recur, the patient is subjected again to the additional dangers that cluster about a doubtful case. In this connection I want to make mention of a case of one of our colleagues, which I saw when it was apparently a doubtful case. The patient was ready for operation, and Dr. Fowler was ready to operate upon him at that time; the anæsthetic was about to be administered, but prompted as I was by the feelings I have entertained of a conservative character, I asked that the operation should be delayed. Our patient passed on to an uninterrupted recovery at the time without operation; but within a few months he had a recurrence, which, in spite of treatment, went on to the formation of an abscess. All the dangers of suppurating appendicitis were incurred by our friend; an incision was made and the abscess evacuated, and for the time being the disease was in abeyance; but after a few months, notwithstanding this, he had another attack, which fortunately did not go on to suppuration this time, but from this he has recovered; and at the present time our friend is weighing in his mind the question as to whether now it is not wiser for him to have his abdomen opened and have the appendix in its diseased condition taken out and be relieved of his disease. Had my colleague's desire been granted, had not the conservative advice of his consultant been followed, this appendix might have been removed a year ago, when it could have been done with comparative safety and the dangers of these recurrent attacks been saved him; and I take great gratification in making this public acknowledgment, that I believe my counsel in this case a year ago, that delay should be had and that operation should not be done, was not the best thing for the patient.

There are many phases of these cases of inflammation of the appendix. Let us go slow, acknowledge progress when it comes to us, and give our patients the best thing that can be done for them.

Dr. CRUIKSHANK.—The hour is so late that time will not permit, on this occasion, of much in addition to that which has already been said. I feel so earnestly on this subject, however, having seen

quite a number of cases and having been thoroughly impressed with the great danger to life attending them, that I hope I may be pardoned if I take up a few more minutes of your time in making one or two additional remarks. When I began practice, now nearly eleven years ago, I am free to confess that my ideas on the subject of typhlitic disease were very much confused. I had been taught that perityphlitis was a distinct recognizable condition and paratyphlitis another. That one was intra-peritoneal and the other extra-peritoneal, and that each in its turn required special treatment, and so on; in short, the subject from a pathological standpoint was pretty well mixed. When one met with a case presenting the evidences of acute disease in the region of the cæcum, he was in considerable doubt as to the best course to pursue. Since that time, however, the subject has received the attention of the surgeon and pathologist to such an extent that the pathological changes in this condition are pretty thoroughly understood to exist in the appendix, thus reducing the question to a comparatively simple one, at least as far as diagnosis is concerned, namely, that of appendicitis. Now as to the question of early operation in this class of disease, there does not seem to be much difference of opinion among surgeons. They seem to have come to agree pretty generally on the advisability of early operation. But in the mind of the general practitioner there seem to be grave doubts, and he seems to look upon the question of operation with something like dread. I read this paper this evening, therefore, with the particular purpose of hearing his views on the subject, and I am very sorry that time will not allow a more general discussion. I think the literature upon the subject up to within two years ago is very confusing and misleading, and is probably responsible for the failure of the physician in many cases to recognize the true condition as it is now understood. I do not want to be understood as advocating cutting in every case of appendicitis, but I very strongly advocate the calling in of competent surgical advice during the first twenty-four hours of existing disease, so that the question of early surgical interference can be thoroughly discussed. If contributions of this character will be the means of impressing on the mind of the physician the great necessity of viewing these cases from a surgical standpoint during the first twenty-four or forty-eight hours, we will have accomplished something toward reducing the present existing large mortality in this disease.

## ARISTOL IN THE TREATMENT OF ATROPHIC RHINITIS.

BY W. C. BRAISLIN, M.D.,

Read before the Long Island Medical Society, January 8, 1891.

There is something in the make-up of the man of the nineteenth century that seems continually to demand something new. The craze for the new and novel seems to be a characteristic of the times. The spirit is contagious, and the conservative medical man is also drawn to a greater or less extent into the current.

New instruments, new drugs, new what-nots are forced on his attention by makers and brother medical men alike. We are astonished, however, not so much that new remedies are being constantly proposed as that they receive almost invariably a fair and thorough test of their efficacies. From this effort to get at the real value of a drug, combined with the inert spirit of life to live under the most unfavorable circumstances, our new drugs almost invariably present at first a wide horizon of therapeutic properties, which, as time goes on, as a rule narrows to the vanishing point.

Aristol, while not now a new drug, is still classed among our newer ones, and is not an exception to the rule. Whether or not it will share the general fate remains to be shown by that test, which time only can give. It has been used and recommended in almost every known surgical affection. In recent medical journal reports its usefulness has been separately recommended in the following catalogue of disorders: Psoriasis, eczema, lupus, sycosis, scabies, ringworm, condylomata, intertrigo, erysipelas, eruption of bromism, chromophytosis, ulcers, specific bubo, gangrene, mucous patches, epitheliomata, hard chancres, chronic urethritis, chronic prostatic urethritis, erosions of the cervix, ulceration of the same, endometritis and metritis. It has been tried in gonorrhœa; but no one claims curative effects. It seems to have no effect on the coccus of this disorder.

Aristol is a reddish-brown amorphous powder, closely related in chemical composition to iodoform. Its odor contrasts favorably with the rank penetrating smell of the latter, in that it is pleasant and inoffensive. Like iodoform, it is insoluble in water, and probably like it, too, antiseptic only when under conditions of sufficient solubility to set free iodine. It is a product resulting

from the addition of a solution of iodine in iodide of potassium, to an alkaline solution of thymol.

Its antiseptic properties are, of course, largely responsible for a wide share of its popularity; but in the field of germicide only, I am inclined to think its claim of superiority will be disputed, and more than likely overthrown, by some of our better known, and longer tried, antiseptics.

Where, however, we require a comparatively harmless, but sure and efficient germicide and odor-destroying agent, combined with a drug which will give us the quality of a mild local stimulant, I am so far unacquainted with a superior article.

It is with this excuse of attempting to widen a knowledge of its therapeutic properties, that I make bold to bring the consideration of this drug before you. It is, as I have stated, to the use of aristol in atrophic rhinitis, that I wish to call your attention; and at once let me say that by means of its use no claim to curative properties, in the sense of restoring destroyed glands or wasted tissue, is made; but simply of so relieving distressing symptoms by its use, that the patient is nearly or completely unconscious of his deficiencies in respect to gland destruction.

To more clearly lay out the mode of treatment, it will be more logical, perhaps, to review briefly the leading points in the pathology of this disorder.

Beginning with the mucous membrane, we find, instead of the normal columnar ciliated epithelia, a layer of broad flat, epithelial cells, desquamated, and devoid of cilia. The adenoid layer is thinner than normal, and full of lymph corpuscles. Its blood-vessels are diminished in number and of decreased calibre.

The acinous glands are atrophied and more or less completely destroyed. In the submucous layer there is a total disappearance of the venous sinuses. In short, we have an atrophy of the mucous membrane, seemingly due to the transformation of epithelial structures into inflammatory corpuscles; and also, an epithelial desquamation from the surface of the membrane and lining of the acini.

The train of symptoms to which this condition gives rise is briefly, viz.: The mucous membrane is practically unmoistened by mucus, and is unable to saturate as it should the inspired air or to properly filter it; consequently, the air on its way to the lungs extracts from the membrane of the pharynx more moisture than it should. This gives rise, sooner or later, to that well-known concomitant of atrophic rhinitis, namely, a chronic pharyngitis, with apparently increased secretion of sticky, stringy, adherent mucus,



dropping in the throat, feeling of dryness in the throat, of nausea, etc., as prominent symptoms.

Further, the apparently increased secretion of mucus in atrophic rhinitis, really the decreased secretion, is often the more prominent symptom; namely, in giving rise to the formation of hard lumps or crusts.

Originally forming, as has been stated, by reason of its decreased amount of watery ingredients in the secretion, these crusts act like so much collodion, and by their contractile tendency promote still further by their pressure-effect the atrophic condition of the mucous membrane, underlying venous sinuses and turbinated bodies.

Further, these crusts are only with difficulty removed by the patient. They tend to occlude the nostrils; they are retained to a greater or less extent, and, as a matter of course, decay, giving rise to that most prominent and disagreeable symptom of fœtor, to the odor of which, too often, not alone the patient, but his friends are unwilling victims. Hoarseness, and hacking and hemming are often present, due to the before-mentioned imperfect preparation of the air for its reception on the more delicate larynx and cords.

The use of aristol in the treatment of atrophic rhinitis is, of course, but one factor in the attempt to regain an improved condition in this disorder.

Under all circumstances the first indication would be to get rid of the inspissated muco-pus. For this purpose the most preferable, and at the present time the most popular method, is by means of the spray; and for this purpose, let me say, not alone on my own authority, that the small hand-ball atomizer is as good as a whole Sass outfit.

The spraying material used should be disinfecting to correct fœtor and decomposition; also, alkaline because more solvent to the crusts. After the use of the spray, cleanse as much as possible the nares by gently blowing of the nose, or by wiping with plugs of absorbent cotton.

Now, as a further step in treatment, we want an agent efficacious as a deodorizer and as a germicide; and, further, one mildly stimulating to the damaged acinous glands—one that, while acting antiseptically, will, at the same time, tend by its effects to increase the watery elements in the nasal secretion. It is to cover this part of the treatment that I recommend aristol as a drug of superior efficacy. It is antiseptic, mildly stimulating, with no unpleasant odor or sensation on application. It is easily applied

by means of an insufflator and in its original powder form, in which it is immediately adhesive and partly protective. On the bare and bleeding surfaces left by the removal of crust, it thus forms a kind of improvised antiseptic dressing. The process of granulation seems to proceed with extraordinary rapidity under its use.

In this rapid sketch it has been impossible to go into the details of treatment of this disorder, its complications, etc. The cautery, the curette, the saw, the snare, are all, of course, brought into requisition on occasion; but I take pleasure, in recommending aristol, as to many men who devote special attention to this branch of surgery, I am aware of its having come in the light almost of a discovery.

I have lately been using aristol also as a dusting powder, following the use of the cautery, applied for whatever reason to the nasal cavity.

*107 Gates Avenue, Brooklyn, N. Y.*

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### AN ASEPTIC SUTURE CYLINDER.

BY RICHARD SLEE, M.D.

Assistant to the Department of Physiology, Hoagland Laboratory, Brooklyn.

The simple plan, shown in the accompanying cut, has been devised to enable the surgeon to obtain, at a reasonable cost, an absolutely antiseptic suture which can be carried about without danger of becoming infected.



It needs but a few words to explain it, and its advantages are apparent. The whole arrangement, in a nutshell, consists of a glass reel of properly prepared silk, or whatever material one may wish to use as a suture. This is sealed off in a glass cylinder.

The cylinder has a small aperture in the side, which is stopped with a tightly-fitting rubber cork, cemented in, so as to make the cylinder absolutely air-tight and germ-proof.

The cork has a fine hole through the centre, through which the silk is drawn as required for use.

The silk is prepared according to the method devised by Prof. A. J. C. Skene, and after years of severe tests seems to fill all requirements. It is prepared as follows :

The silk is wound on a glass reel, and then boiled for one hour in a bath consisting of one part each, by weight, of carbolic and salicylic acids to thirty-two parts of yellow beeswax, all thoroughly mixed by boiling.

It is now transferred to a sterilized bottle and allowed to cool, when it is ready to be sealed off in the cylinders.

After being sealed, the loose end of the silk is drawn through the aperture in the side and passed through the rubber cork, which is pushed into the aperture, completely shutting the suture in from all outside influences.

The sealed cylinder is now placed in a steam sterilizer for one hour and kept at a temperature of  $212^{\circ}$  Fahr.

It is then set aside to have another hour's steaming the next day. By these means it is rendered absolutely free from all forms of germ life, and is ready for use.

Anticipating that the only opening into the cylinder, viz., through the rubber cork, might raise the question as to whether it were germ-proof, the following severe tests were made :

Ten cylinders prepared for the market were selected at random, and were placed in a liquid suspension of pus organisms, so that the minute openings in the corks were kept covered by the fluid. These cylinders were allowed to remain in the suspension for one hour, after which time they were removed and washed with ordinary water.

The silk was then drawn out, and that portion of it held by the cork was placed in gelatine culture tubes.

At the end of four or five days they were found to be absolutely free from all forms of germ life, while the "control" tubes, inoculated at the same time with the same suspension, showed luxuriant growths.

Several other cylinders, prepared in the same manner, were carried in the pockets of an ambulance surgeon, and used constantly. At the end of two weeks some silk was drawn from the cylinder and placed in culture medium, but no growths were obtained.

After these severe tests I think it may be said that the cylinders are germ-proof, and will remain so, as there is enough wax on the silk to keep the hole in the cork constantly plugged.

The above tests were conducted in the Department of Bacteriology, Hoagland Laboratory, under the immediate direction of Dr. B. Meade Bolton, director of the department, to whom I am very much indebted for his kind and valuable co-operation in the numerous trials and tests which were made before bringing the cylinders to the notice of the profession. And I am at liberty to say that Dr. Bolton considers them to be absolutely free from all forms of germ life, and that they will remain so when prepared according to the method described.

I am also greatly indebted to Prof. A. J. C. Skene, whose name appears on the label of each cylinder, and whose hearty approval of the scheme has encouraged me to bring it to the notice of the profession.

The extreme simplicity of the arrangement, together with its handy form and cheapness, and devoid as it is of the objectionable points of many of the other devices on the market, I feel sure will recommend it to the profession.

It avoids the use of fluids, screw tops, axles, etc., and the fact that the suture can never come in contact with the hands of nurse or assistant, are all points in its favor.

But, of course, the most important point is, that it is absolutely antiseptic and will remain so, as has been shown.

These sutures are now manufactured and furnished to the profession by Messrs. Kersten & Kaysan, 198 Joralemon Street, Brooklyn. The manufacturers follow the instructions laid down in the minutest detail, and warrant the sutures in every respect.



## AN INTERESTING CASE OF EXTRA-UTERINE PREGNANCY.

BY WILLARD P. BEACH, M.D., BROOKLYN.

The subject of ectopic gestation is always one of interest, as no one symptom is ever pathognomonic, no uniform set of symptoms is ever constantly present, and no two cases show exactly the same features. Besides all this uncertainty is the extreme urgency for prompt action on the part of the physician and the very large mortality in these cases. I think it therefore behooves us to report and study all cases of this sort, whether only suspected or absolutely verified.

The following history of a case is decidedly unique, inasmuch as there was positively no mistake in regard to the woman's pregnancy.

Mrs. R., twenty-eight years of age, had been married seven years. She has one child, now six years of age. She was in perfect health and has an excellent family history. She had never had a miscarriage up to March, 1889. She then missed one month and two weeks, when she was suddenly seized with free flooding, which was being treated by a homœopathist, who gave her pellets and allowed her to walk about, and the flow increased, besides being now associated with uterine cramps. She grew dissatisfied with her treatment, and came to me April 2, 1889. She was immediately put on ergot, instructed to rest, and the flooding soon stopped, but left considerable metritis, with leucorrhœa and severe pain over the left ovary. Left salpingitis was my diagnosis, associated with more or less metritis, and ovaritis, owing to long-continued congestion of the pelvic organs; and this congestion and hæmorrhage were no doubt due to a miscarriage, though there was no pain in the beginning.

Shortly after this time the lady left for Europe on a pleasure-trip, and I heard nothing of her until she returned in September, 1889. During her absence her courses had returned regularly, and most of her pain had left under the influence of hot vaginal douches and ergot. Up to September 28, 1889, her courses were perfectly normal and regular. She then missed a period, and on October 28th was unwell again. During the night of October 28th I was hurriedly summoned to see her. She was in a state of collapse, pulseless, almost breathless, cold, pale, clammy perspiration, etc. She was in agony, the pain starting in the left inguinal region, and radiating over the entire abdomen. Tympanitis was marked. Uterine colic was the diagnosis, and she was treated accordingly. The flow stopped on the fourth day. Three days after the above attack she had another, and at intervals of a few days these attacks returned for a month. Sometimes it seemed as though she would certainly succumb. Dr. Skene saw the case with me about this time, and agreed that it was either an acute cellulitis or an hæmatocele. Six weeks after the first attack I discovered that the lady was pregnant of a living child. Dr. Skene saw her again, and agreed that she was in the "family way." He thought it was probably a pregnancy in a uterus bicornis or an interstitial pregnancy. There was a decided enlargement in the left inguinal region, about the size of a cocoanut, which he believed to be inflammatory products, and he advised against an operation, as he felt certain that the foetus was within the uterus. The foetal movements were so vigorous as to keep the mother awake at night, and all the other symptoms of pregnancy were exceedingly well marked.

About this time, seventh month of gestation, the woman was very much emaciated and weak, but the pain was steadily diminishing, although occasionally exacerbations occurred.

At the end of the seventh month the foetal movements suddenly ceased; I could no longer hear the child's heart. It was dead.

I waited two weeks for the foetus to come away, and as it did not do so in that time, the cervix was dilated with tupelo tents; but nothing left the uterus.

At the present time—March, 1891, two years and eight months after her conception—she is menstruating regularly; this has been the case since one month after the death of the foetus. She is the picture of health, and the abdominal enlargement has very much reduced in size. All her pains and aches have left her, and she enjoys life as much as ever.

The only evidence of the trouble is discernible on palpation, when a well-defined tumor is found in the left inguinal region, which is steadily growing smaller. Nothing has ever come away from the uterus during these two years and eight months, although she had all the symptoms of a very gentle labor at the ninth month after conception.

This was evidently an abdominal or a tubal pregnancy and the foetus has become encysted.

Now, there are many questions of interest suggested by this case. 1st. At what time did she conceive? 2d. Was this a tubal or an abdominal gestation? 3d. Is the left tube now obliterated? 4th. The foetal movements and heart were felt and heard most distinctly in the right lumbar region: how is this explainable when all the trouble seemed to be on the left side? 5th. Should we have operated, and if so, when? 6th. What will be the result if the woman conceives again and does not miscarry? All these and many other interesting questions are to be pondered over when such a case as the above is encountered.

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## A CASE OF PENETRATING STAB WOUND OF THE ABDOMEN; LAPAROTOMY; RECOVERY.

BY H. BEECKMAN DELATOUR, M.D.,

Assistant Surgeon, Methodist Episcopal Hospital; Surgeon, Norwegian Hospital, Brooklyn.

Read before the Brooklyn Surgical Society, February 19, 1891.

In June, 1889, Dr. T. S. K. Morton, of Philadelphia, presented a paper before the American Medical Association on "Abdominal

Section for Traumatism, with Tables of Two Hundred and Thirty-Four Cases,"<sup>1</sup> in which he very thoroughly reviewed cases of both gunshot and stab wounds treated up to that time. His table containing the cases of stab wounds treated by abdominal section is quite complete, and it would be useless for me to go over the cases again.

This table contains 79 cases, with 48 recoveries—a mortality of 39.75 per cent. During the past eighteen months this mortality has been considerably reduced. In glancing over the table given by Dr. Morton, we find in the majority of cases which ended fatally that the operation was either delayed a number of hours, or else some wound was overlooked, while in one case death was the result of acute opium poisoning. Although still high, this mortality compares very favorably with only 8 per cent. of recoveries in cases not operated upon, as given by Nancrede.<sup>2</sup>

In these cases we usually have to deal with a wound produced in a personal encounter between individuals, and so the treatment becomes a matter of importance from a medico-legal standpoint. There are records of cases of murder in which the defendant has claimed that death was due to the surgeon's interference; and, again in another case the plea was made that the patient might have been saved by operation. With such a condition confronting us, it is the duty of every surgeon having a case of this nature to report it, in order that the statistics may be complete.

The case I have to report is in no way remarkable at the present day, but will assist in lowering the mortality, and will also present a few points for discussion regarding the treatment of cases of this class.

J. F., a native of Italy, age seventeen, was found by ambulance surgeon De Forrest, at about 4.30 o'clock on the morning of December 9, 1890. Four hours previously he had received a stab wound of the abdomen, was carried home, and, as he was becoming very weak, the ambulance was summoned. When found, the patient was pale, skin cold and covered with perspiration, and the pulse very rapid and weak. Examination showed a linear incised wound, half an inch in length, about two inches to the left of and a little below the umbilicus. A small piece of fat was projecting from the wound. A temporary bichloride dressing was applied, and the patient immediately removed to the Methodist Episcopal Hospital.

<sup>1</sup> Journal Am. Med. Association, January 4, 1890.

<sup>2</sup> Medical News, May 31, 1887.

After admission to the hospital, the pulse was slower and stronger, and examination of the wound at this time showed the protrusion of about an inch of omentum.

*Operation at 6.30 A.M.*—The greatest care was taken in cleansing the skin of the patient about the field of operation. It was thoroughly scrubbed with soap and water, then with a bichloride solution, and finally with ether. The hands of the operator and assistants were thoroughly scrubbed. The instruments, sponges and dressings were sterilized by heat. No antiseptic solutions were used except for washing the hands of the operators and the skin of the patient.

An incision six inches long was made, having its centre at the point of entrance of the knife. After dividing the skin, a space was found to exist in the abdominal wall, the result of separation of the ends of the divided rectus muscle. This space contained a blood clot. The wound in the peritonæum was found to be an inch nearer the median line and half an inch above the wound in the skin. The protruded portion of omentum was ligated and removed, and the stump dropped back into the abdominal cavity. Immediately there was a gush of blood, and on enlarging the opening in the peritonæum, the abdominal cavity was found filled with fluid blood and with active hæmorrhage present. It was evident that the first thing to do was to search for the principal bleeding point. The direction of the knife, as shown by the relations of the wounds in the skin and peritonæum to each other, being inward, upward and backward, the probable source of hæmorrhage was judged to be in the region of the stomach or duodenum. In order to quickly search for the source of bleeding, the intestines were immediately turned out, and at the base of the mesentery, about an inch from its attachment to the vertebræ, an opening was found to be the point from which the principal hæmorrhage had come. A vein in the mesentery had been divided by the knife, and a large blood clot had formed between the two layers of peritonæum going to make up the mesentery. This opening was closed with a continuous suture. Search for further wounds revealed two more in the mesentery near the gut and a wound of the intestine extending through all its coats, with eversion of the mucous membrane, but without fæcal extravasation. These wounds were closed with continuous sutures.

The intestines were then returned to the abdominal cavity, loop by loop, so that the entire mass might be examined and no opening in the gut overlooked. After returning the intestines, there was found to be considerable blood between the coils of intestines.



This was sponged out as clean as possible, and the wound of the abdominal wall closed with a single layer of interrupted sutures, a glass drainage-tube being placed in the lower angle. Sterilized silk sutures were used for closing the wounds in the gut and mesentery, and silkworm gut was used in the abdominal wall.

An absorbent sterilized dressing was placed over the wound, and a separate dressing placed over the drainage-tube in such a way that the tube might be dressed without exposing the wound. A piece of sterilized gauze was introduced to the bottom of the tube to assist the drainage.

The operation lasted fifty-five minutes, and the patient left the table in very good condition.

All the morning after the operation the patient was very thirsty. This was relieved by water and cracked ice. There was also present "air hunger," there being a continual desire to have the windows opened: and combined with these there was extreme restlessness. These symptoms go to show the severity of the hæmorrhage, which was principally into the abdominal cavity before operation.

*Dec. 10.*—Patient continued to be very restless, tried to get out of bed, and continually pulled at the bandages, so that his hands and feet were tied. It was difficult to make the patient understand what the dangers were, as he could understand but very little English. He complained of considerable pain in the region of the wounds. The tube was dressed three times a day at first, and the gauze was considerably stained at each dressing. Ordered fluid diet, and opium in moderate doses. The ice-water coil was applied to the abdomen.

*Dec. 13.*—Pain has entirely disappeared, the thirst is no longer present, nourishment is taken without difficulty, and there is almost no discharge from the tube.

*Dec. 21.*—The drainage-tube was removed, and the entire wound dressed. The wound healed by primary union.

In order to lessen the chances of ventral hernia, the patient was kept on his back in bed until January 11th, although after the tenth day his condition would have admitted his being up.

*Jan. 17.*—The patient was discharged. During the last week he was about the ward, and kept perfectly well. At no time did his temperature exceed 99.6°. On being discharged, he was ordered to wear an abdominal binder.

A point of interest in this case is, that at the time the patient was found by the ambulance surgeon, he was evidently suffering from concealed active hæmorrhage, his pulse was rapid and feeble

and the skin cold and pale, while at the time of admission to the hospital the pulse was slower and of better quality. What is the explanation of this?

It seems clear to me that the hæmorrhage was profuse until the intra-abdominal pressure was so increased by the pressure of the blood in the cavity that the vessels were partly occluded and to a certain extent the bleeding controlled. Almost no blood appeared externally. This was due to the blocking of the opening in the abdominal wall by the piece of omentum which protruded. When the patient was first seen, the piece of omentum projecting was so small that it was impossible to recognize it. Considerable credit is due the ambulance surgeon, who immediately recognized the probable conditions present and did not explore the wound; nor did he attempt to decide whether the projecting mass were fat or omentum. The result of having replaced this portion of omentum would have been, as shown during the operation, an immediate gush of blood and further extensive hæmorrhage, if the theory advanced above be correct.

Although I am aware that, as Morton declares in his paper, the median incision is universally commended, I think in this case much was gained by entering the abdomen at the point of injury, for it revealed the large cavity that existed between the skin and peritonæum, and which would have been a focus for suppuration; it gave a chance to judge of the direction of the knife, for a knife cannot be deflected as a bullet might, by observing the relations of the skin and peritoneal wounds; and, third, it was sufficiently near the median line to make very little difference.

While the advantage of the median incision is conceded by all, the use of opium in these cases is still a matter for discussion. Morton, in the paper before quoted, says: "Opium in any form should absolutely never be used except to relieve pain—even then most tentatively and with the belief that under any circumstances it is an agent of extreme danger after abdominal operations, and to be dispensed with at the earliest opportunity after the pain for which it has been administered has been relieved by salts or otherwise." Mr. Greig Smith, in the last edition of his work on "Abdominal Surgery," in the article on stab wounds, says: "If opium is to be recommended anywhere in abdominal surgery, it should be in such cases as these which are frequently attended with considerable mental disturbance."

Dr. Skene,<sup>3</sup> in a recent article on the "After Treatment of Laparotomy," defends the use of opium, and says: "While there

<sup>3</sup> Brooklyn Med. Journal, February, 1891.

are a number of reasons why it should be used, I have not yet heard of any good reason why it should not be." He gives as reasons for its employment: "To relieve pain, produce sleep and, above all, rest and quiet, which are so necessary to recovery after major operations." He further says: "The danger from shock which arises from major operations is, I am sure, controlled by opium better than by any other drug. So also is the depression from anæmia resulting from hæmorrhage." Those who advocate the use of opium, as a rule, prefer either the hypodermatic method or else the introduction of the drug by the rectum. The use of opium in cases of hæmorrhage has always seemed to me to be of the first importance. It should not be given in large doses, but rather in small and frequent doses, as a sedative both to the nervous and circulatory systems. I am sure that under these circumstances it is an excellent heart tonic.

The advantage of immediate evisceration was very great in this case, as it instantly brought to view the base of the mesentery, the point of the principal hæmorrhage, and afforded opportunity to thoroughly inspect the entire mesentery and gut as they were replaced. Of course, evisceration should not be practiced unless the bowels can be properly cared for, by covering with hot towels, etc.

Although the abdomen had been flooded with blood, flushing of the cavity was not resorted to, as I believe it tends to produce only a temporary stimulation, which is succeeded by more profound shock. I also believe that it tends to spread septic infection.

I am aware that the highest authorities advocate flushing, and claim that it is a decided stimulant and that it will prevent shock. I have had the opportunity of carefully watching the pulse in laparotomies, having nothing to do with the operation, a number of times, and, with a few exceptions, have always found that the pulse becomes stronger and slower at the beginning of the washing, while it soon becomes more rapid and feeble than it was previous to the flushing.

I am convinced that thorough and complete drainage, as is procured by the combination of capillary drainage and the glass tube, will more surely and safely remove the dangers of infection than will any amount of irrigation.

To Dr. Geo. Ryerson Fowler, to whose service in the hospital the patient was admitted, I am indebted for the privilege of operating on this case, and also for his advice in the after-treatment.

## DISCUSSION.

Dr. PILCHER.—I have only words of commendation and congratulation to the author of the paper for having been the means of saving this patient from his condition of extreme danger, for having had the courage to have so successfully and so quickly instituted such radical measures for his relief, without which he would certainly have died. The treatment as instituted is certainly in accordance with all the requirements of the most advanced teachings of surgical science, and I think we are all to be congratulated that it is possible for us to have such a case reported here. I do not know of anything to criticise or take exception to at all in the management of this case. Even if I had theoretically, the fact of the recovery having been accomplished would be the best evidence that any exceptions which might be taken were either erroneous or captious. Nor have I any similar good results which I can add to the statistics of these cases.

During the last two years I have had two penetrating wounds of the abdomen in this same hospital. One was a stab wound made by a knife in the hands of a companion, which entered the abdominal cavity in the left iliac region, I believe, but was followed by no alarming general or local signs. It was left alone entirely, and it was healed in due time, and the man was restored to his duty. The only thing that we can claim for that particular case was that we did not do anything for it. We might have performed laparotomy to see if there was anything to be done for him, but we didn't, and the man got well; and that is ample justification for the do-nothing policy in that case.

In another case, which, perhaps, I have mentioned in a different connection, a man, in a condition of temporary frenzy, ripped up his abdomen and attempted to pluck out his bowels, so that more or less of the small intestine lay outside the abdominal cavity, projecting through the wound which had been made when he was found by the ambulance surgeon. In that case the bowel was returned and the wound temporarily sutured until after the man was brought to the hospital. I saw him an hour or two afterward. When I re-opened the wound, I found the abdomen to be full of blood and serum, and some thirteen inches of the small intestine already falling into a gangrenous condition, having been torn away from its mesenteric attachment. In that case I excised this portion of the intestine, closing the two ends and forming a lateral anastomosis between the two stumps. He bore the operation well, but on recovering from the anæsthetic remained wildly

delirious and died six hours later, the death being due apparently rather to the general condition which had caused him to produce this wound than from the effects of the wound itself; for he did not suffer from the shock of the operation, nor was he in condition of great shock at the time operation was done, but he seemed to take up again the thread of his delirium, and went on to his death.

These are the only two cases which I have personally to relate of perforating incised wounds of the abdomen of late years in which the present tenets of surgery were attempted to be practiced in their treatment.

Now in relation to the treatment of the drainage-tube which has been described to us, I want to commend it as an exceedingly simple, efficient way of caring for a drainage-tube. Recently, after an ovariectomy, in which there were extensive adhesions and many ligatures had to be applied and a considerable amount of raw surface left in the course of the operation, I inserted a drainage-tube, dressed it as described, and kept it in place for a space of ten days, during which time no suppuration whatever developed. I was able to keep the peritoneal cavity free from infection, while all of the fluids effused into the peritoneal cavity were removed, with ease to the surgeon and with perfect comfort to the patient. At the end of that time, when the bloody effusion had subsided, I was able to remove the tube and close the wound without any subsequent disturbance within the peritoneal cavity. In the external wound there was a little suppuration where the tube passed, but it was insignificant and did not interfere at all with the perfect and steady course of convalescence of the patient. I know in the past the proper care of the drainage-tube in these abdominal cases has been one of great solicitude to myself, and I believe that the method that has been described to us is one that answers our need so perfectly and so easily that it deserves to be generally adopted.

Dr. WUNDERLICH.—The case illustrates that good results may be obtained by prompt and judicious action; it also illustrates that a great deal of harm may be done by the application of Dr. Senn's method of rectal insufflation by hydrogen gas as a means of ascertaining the presence or absence of a wound in the alimentary canal.

If a large blood-vessel is wounded, important time would be lost by the application of the test, and the danger of a fatal issue in consequence of hæmorrhage would be increased.

Dr. Senn demonstrated his method before the Surgical Section of the Tenth International Congress at Berlin. He fired several shots with a revolver into the abdomen of a dog, and applied the hydrogen test successfully, demonstrating the presence of wounds in the alimentary canal by the escape of the gas into the peritoneal cavity.

However, when the abdominal cavity was opened, a large amount of blood escaped, due to free hæmorrhage from a large blood-vessel in the mesentery which had been injured by one of the bullets, and the animal died in a short time, before the wounds of the intestines could be closed.

It was pointed out at the time that in case of internal hæmorrhage the application of the hydrogen-gas test would only increase the danger to the life of the patient, since valuable time would be lost which might be employed to arrest the hæmorrhage.



#### THE LONG ISLAND MEDICAL SOCIETY.

It gives us pleasure to notice the enterprise that is manifest among the young men of the profession in this city, and in this connection call attention to this organization which has sprung into existence during the winter just passed. The Society is made up of young men presumably not more than three years out of college, and has for its objects the cultivation of friendly intercourse throughout the profession, the exchange of personal experience and the preparation and delivery of scientific papers based on original research and exhaustive reading. At present each member in turn gives the use of his office for the semi-monthly meetings. It will be our pleasure to publish the papers read before this society, and believe it will be to the profit of our readers.



#### PROGRESS IN MEDICINE.

Dr. Jerome Walker has been compelled, by the pressure of other duties, to sever his connection with the JOURNAL. For his contributions to the department of Children and their Diseases the JOURNAL and its readers are much indebted. It is a gratification to the Editorial Committee to be able to announce that Dr. Francis H. Stuart has kindly consented to take charge of this important department.

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## EDITORIAL.

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### MEDICAL LEGISLATION.

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Thanks to a deadlock in the Senate, the Legislature of 1891 has adjourned *sine die* without having, so far as we now know, tinkered with the existing laws relating to the practice of medicine in this State. It has, in an important particular, amended Chap. 507, Laws of 1890, but this amendment was but an act of justice to medical students.

Chap. 507 is the act which goes into effect in September, requiring three courses of lectures and an examination before a State Board of Medical Examiners as preliminaries to practicing in New York State. Under this law came all who had not qualified by September 1st, no matter how far advanced they might be in their medical education. Many students had entered upon their medical course under the old law requiring but two courses of lectures, and had made their financial arrangements with this requirement in view. To compel such to take an additional course, with the additional expense which would be involved, would work injustice, and in some cases actually debar students from graduating. Under the amended law, students who were matriculated in a medical

college of the State of New York prior to June 5, 1890, are exempted from the provisions of Chap. 507. In signing the amendment, the Governor filed the following memorandum :

This bill seems to be a reasonable and proper measure. On June 5th of last year I cheerfully approved the act which provided for the creation of a Board of Medical Examiners, which act was intended to pave the way for the establishment of a higher standard for practitioners of medicine to be thereafter admitted. There was considerable opposition to the bill at the time, but such opposition was not permitted to prevail. Through inadvertence, it must be assumed, last year's bill omitted to exempt from its provisions those students who had duly matriculated at some medical college prior to the passage of the act. This bill simply supplies that omission. The amendment is deemed entirely reasonable. Had my attention been called to the subject last year I should have insisted that such students should have been exempted from the provisions of the new act. The course suggested is not without precedent. When in 1871 new rules and regulations were established for the admission of law students, the Legislature subsequently, by repeated acts, expressly exempted from its provisions certain classes of students who had already entered law schools or who had regularly entered upon their law studies prior to the enactment of the law. (See Chapter 417, Laws of 1877; Chapter 126, Laws of 1878; Chapters 35, 257 and 349, Laws of 1879; Chapter 58, Laws of 1880, and Chapter 25, Laws of 1881.) These precedents are exactly in point.

The Court of Appeals recently established new and additional rules for admission to the bar, but in the very order providing for the change it declared that the new rules should not apply to law students who had previously filed their certificates and were actually engaged in their studies. (See recent rules of Court of Appeals.) This seems to be just and fair in reference to law students, and we can see no good reason why the same equitable principles should not be applied to medical students who had acted in good faith and who may be said to have acquired certain vested rights prior to the act of last year. The present bill does not deserve the criticism to which it has been subjected. It is based upon a correct principle, and I can discover no good reason why it should not be approved.

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#### OPEN HORSE-CARS.

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In the May issue of the JOURNAL we published an order from the Health Commissioner relative to the running of open horse-cars. This order prohibits the operating of such cars until May 15th, except on days when the temperature is not less than 70° Fahr. in the shade, and then only between the hours of 10 A.M. and 6 P.M. It is claimed that this order has been complied with by all the railroad companies but one, and the president of this company has been brought before the court, on complaint of a physician, for a



violation of the order. The trial of the case has not yet taken place.

Since the issuing of the order, the Health Commissioner has sent to the Common Council the following ordinance, asking that body to approve it, thus making it a valid ordinance :

No person or persons, corporation or railroad companies owning, leasing or operating any surface railroad in the city of Brooklyn shall use, operate or run, or permit to be used, operated or run or assist in the operating or running of any open car or cars on any of the surface railroads in said city of Brooklyn between the 15th day of September in any year and the 15th day of May in the next succeeding year.

Any person or persons, corporations or railroad companies violating this section shall be subject to a penalty of not less than \$10 nor more than \$100 for each and every car used, operated or run in violation thereof.

At a meeting of the Railroad Committee, to which the proposed ordinance was referred, several physicians appeared, and expressed their views on the subject. The following summary of the proceedings of the meeting are taken from the *Brooklyn Eagle*, May 9th.

Dr. Griffin, Health Commissioner, said that during the last few months La Grippe in an epidemic form had existed in this city. The mortality had been largely increased on account of it. The commissioner read some comparative figures of the ratio of deaths during the weeks of April in 1890 and 1891 to show how extremely fatal the epidemic had been this year. Medical men were not decided as to the cause of the disease, but there could be no question that certain precautions were possible. With this in view he had appealed to the presidents of the different street railroad companies to refrain from running open cars before May 15th, except between the hours of nine and six, when the temperature should be above 70 degrees. Presidents Lewis, Richardson and Beers answered the commissioner's letter promptly, and agreed to do as he requested. President Partridge of the DeKalb Avenue lines alone refused to accede to the request, and declined to recognize in any way his authority to dictate as to the administration of his road. This brought the matter to an issue. A medical practitioner of reputation made a complaint against the continued running of open cars after the issuing of the commissioner's order, and the matter was taken into court, where it is now pending adjudication. Dr. Griffin said that his course in issuing his order regarding the open cars was based on a belief that the public safety called for immediate action. The commissioner then introduced Dr. Wallace, who addressed the committee briefly, saying that he had no doubt that the running of open cars increased the amount of sickness and the number of deaths in the city. Dr. Williams followed Dr. Wallace in the same vein, but advocated a temperature limitation in preference to the proposed time limit for running open cars. Dr. Bodkin agreed with Dr. Griffin, and thought that the public health demanded the passage of the ordinance. Dr. Moore also spoke in favor of the ordinance, and said that the testimony of patients as to the harmful effects of the open cars at this time of the year which they were forced to ride in because no others were available, was plentiful.

In opposition to the medical opinion thus expressed, President Lewis, of the Brooklyn City Railroad, said :

"Sometime in April I received a letter from Commissioner Griffin asking me not to run open cars before May 15th on days when the temperature was below 70 degrees. I replied and told him of the difficulties under which we were placed in running open cars. Some people demanded them while others complained against their being used. I told him it would give me pleasure to accede to his request, and I did so. Prior to his letter the city company was acquainted with the prevalence of this disease and had given orders to the superintendent to use care in running the open cars. If you compare our running of these cars this year with previous years, you will see what precaution we have used. I believe the time limit during which these cars should be and should not be run is impracticable. It would work inconvenience to the people who use the railroad. I think temperature if anything should control this matter. I do not believe any ordinance is necessary. I am confident that the managers of companies can be relied upon to use proper judgment. This epidemic is a thing that does not occur twice a year. Certainly the operation of open cars did not cause it. It was here before an open car was run. But suppose you make a cast-iron requirement that no cars shall be run except when the temperature is 70 degrees. This might be the temperature by the thermometer at the stables, and when the car reached the City Hall it might be down to 65 degrees, and the open car would be running in violation of the law."

President William Richardson, of the Atlantic Avenue Railroad, asked Dr. Griffin at what time the grip was prevalent last year. The doctor said in the months of January, February and March.

"Not one open car," said Mr. Richardson, "was run in Brooklyn during that period. Now, I want to say right here that when any city official wishes any changes in the management of the Brooklyn railroads, the surest, and therefore the best way to secure these changes is to ask for a conference with the railroad officials. We have run open cars for twenty years, and I will say that they were first run on the Atlantic Avenue road. We found it paid to run them, and why? Because the people wanted to ride in them. When we please the people we make money in doing it. When we don't please the people we lose in not doing it. The man who would run an open car in cold weather is a fool. These open cars seat comfortably from forty-five to fifty. The closed cars only seat twenty or twenty-two. They don't carry any more, but they carry them more comfortably. People ride in them for pleasure. That is the reason why they are used on days when the weather is fit to run them. Our closed cars are a drag on such days. It is to our interest to have all the people well enough to ride on both open and closed cars. There should be no law that could forbid us running an open car on a day in the latter part of September when the temperature may be 90 degrees. I don't believe there is any more need for a law on this subject in the year of our Lord 1891 than there was in the year 1881. It is not the cold so much as the draught that is injurious to health. There is more danger from draughts in a closed car in which some crank opens one of the front windows than in an open car with a closed glass front and back. If you could get through a law that would do away with open cars entirely, it would be a God send to us, for we have to pay enormously for the storage of this double equipment of open and closed cars."

Mr. Richardson urged that Commissioner Griffin should confer with the railroad managers, and to this the commissioner agreed, saying, however, that it would be for the purpose of obtaining more clearly their views on the subject, and which, with his own, would be reported back to the committee. The committee then adjourned after having set next Friday evening as a time for the second hearing regarding the proposed ordinance, or an alteration of that ordinance if Dr. Griffin and the railroad presidents should agree on changes, or to learn if the conference decided to get along without any law on the subject.

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OBITUARY.

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PAUL H. KRETZSCHMAR, M.D.

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Dr. Paul H. Kretzschmar died suddenly in this city on the 27th of April at the age of forty-four years. His death was caused by acute nephritis and uræmia. He was born in Dresden, in 1847, and graduated from the University of Berlin. He came to this country in 1869, and in 1872 opened a drug-store in Brooklyn. In 1877 he was graduated in medicine from the Long Island College Hospital, and during 1889 and 1890 was Vice-President of its Alumni Association. At the last annual meeting of this association he was elected president. In 1889 he was elected by the people of Kings County Supervisor-at-Large, and held that office at the time of his death. His official life has been characterized by a vigorous effort to reform the existing unbusiness-like practices at the County Farm at St. Johnland, and to inaugurate needed changes at the Flatbush Hospital.

At a meeting of the Board of Managers of the Association of the Alumni of the Long Island College Hospital, the following minute was adopted:

In the death of Dr. Paul H. Kretzschmar the Association of the Alumni of the Long Island College Hospital has to mourn the loss of one of its founders and most zealous and devoted members. As Vice-President and one of its Board of Managers, his services have always been at the call of his associates, and none of them has been more watchful of its interests than he. The association recently testified its appreciation of his worth and the esteem in which he was held by unanimously electing him to the responsible position of president. This honor he regarded as an exalted one, and it was his purpose, if possible, to make the year of his presidency memorable in the history of the association by a greater progress than it had made at any time in the past, and especially conspicuous by the completion of the Armor Memorial, to which he had devoted his best efforts.

*Resolved,* That this association, as a mark of respect to its deceased president, hereby pledges itself to the assumption of the work which he has laid down, and to employ its best endeavors to complete the task which he had undertaken.

*Resolved,* That this minute be entered in full upon the records of the association; that it be published, and that a copy attested by the vice-president and secretary be sent to the family of Dr. Kretzschmar.

## PROCEEDINGS OF SOCIETIES.

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### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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A regular monthly meeting of the Medical Society of the County of Kings was held at the Society rooms, 356 Bridge Street, on Tuesday evening, April 21, 1891, at 8 o'clock.

Dr. West in the chair.

There were about 50 members present.

The minutes of the previous meeting were read and approved.

The Secretary stated on behalf of the Council that at their last meeting they had been unable to obtain a quorum of the censors, and therefore had no report to make.

The following applications for membership were read :

Dr. Geo. Chaffee, 171 43d Street; proposed by Dr. J. A. McCorkle; Dr. Frank E. West.

Dr. Jas. L. Cornell, 33 Monroe Place, L. I. C. H., 1889; proposed by Dr. F. E. West; Dr. W. M. Hutchinson.

Dr. Peter V. Burnett, 274 Driggs Street, University of New York, 1876; proposed by Dr. Chas. Zellhoefer; Dr. W. B. Chase.

Dr. Silas C. Blaisdell, 225 Roebing Street, University of New York, 1882; proposed by Dr. Chas. Zellhoefer; Dr. W. B. Chase.

Dr. F. M. Nehrbas, 390½ Clifton Place, L. I. C. H., 1891; proposed by Dr. Chas. N. Cox; Dr. F. D. Bailey.

Dr. Eugene P. Hickok, 114 Pennsylvania Avenue, L. I. C. H., 1890, proposed by Dr. Geo. E. Law; Dr. Wm. M. Hutchinson.

Dr. Robert J. Morrison, 325 Macon Street, L. I. C. H., 1891; proposed by Dr. Geo. R. Fowler; Dr. O. A. Gordon.

Dr. Thomas Aloysius York, 409 Bergen Street, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Richard Slee, 94 Decatur Street, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Joseph Patrick O'Hanlon, 378 Eighth Avenue, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Philip Henry Berlenbach, 16 Suydam Street, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Henry Muller Hufnagel, 209 Hancock Street, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Edward Howard Babcock, 144 Lawrence Street, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. George Gray Ward, Jr., Long Island College Hospital, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Francis Ignatius Leonard, 34 Brooklyn Avenue, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Thomas Louis Fogarty, 549 Henry Street, L. I. H. C., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. William Henry Clowminzer, 416 Monroe Street, L. I. C. H., 1891; proposed by Dr. J. H. Raymond; Dr. Alex. J. C. Skene.

Dr. Chas. Pierson James, 310 Schermerhorn Street, L. I. C. H., 1891; proposed by Dr. A. Ross Matheson; Dr. Geo. Wackerhagen.

The following applicants, having been favorably reported upon by Council, were declared elected to membership:

Drs. C. F. Perry, C. A. Olcott, Thomas B. Hegeman, Samuel C. Casey, Arthur M. Hamilton and Wm. E. Butler.

#### SCIENTIFIC BUSINESS.

The first paper of the evening was by Dr. A. W. Catlin, entitled "Oxygen as a Distinct Remedy for Disease, and a Life-Saving Agent in Extreme Cases," and was discussed by Drs. Burge, Colton and Minard.

The second paper of the evening, entitled "Mechanism versus Surgery in the Treatment of Congenital Cleft Palate," was read by Dr. Rodrigues Ottolengui, of New York, who presented numerous models of cleft palate, illustrating the points brought out in the paper. This paper was discussed by Dr. Norman Kingsley, of New York.

On motion, the thanks of the Society were tendered to Drs. Ottolengui and Kingsley for their kindness in presenting the subject in detail and in such an interesting manner.

#### UNFINISHED BUSINESS.

Dr. Raymond gave notice that at the next meeting of the Society he would move the adoption of the resolutions in regard to medical expert testimony which were presented to the Society in May, 1889, discussed, but not adopted, at a special meeting in January, 1890, and published in full in the *BROOKLYN MEDICAL JOURNAL* of January, 1891.

#### NEW BUSINESS.

A communication was received from the Homœopathic Medical Society of the County of Kings, requesting the Medical Society of

the County of Kings to join with them in requesting the District Messenger Companies to adopt measures whereby the unnecessarily hasty summoning of physicians by messengers to patients, not in immediate need, could be avoided.

Dr. Catlin moved that this Society coöperate with the Homœopathic County Society in this move. Seconded.

A vote being taken, the motion was declared lost.

Dr. Mattison offered the following resolutions, which, after some discussion, were adopted :

*Whereas*, A leading cause of morphinism, chloralism and cocainism is the facility with which morphine, chloral and cocaine can be procured from pharmacists; and

*Whereas*, The refilling of prescriptions containing these drugs is a potent factor in the rise and growth of these diseases; therefore, be it

*Resolved*, As the sense of this Society, that no retail druggist should sell morphine, chloral or cocaine, except on a physician's prescription; that no prescription containing morphine, chloral or cocaine should be refilled, except on the written order of a physician.

Dr. Mattison moved that the librarian be instructed to subscribe to the *New York Medical Record* for one year. Seconded and carried. So ordered.

Dr. Raymond spoke of the possibility of securing more new members, and called attention to the fact that a reference to the registry books in the County Clerk's office showed that out of the total number of physicians registering to practice in Brooklyn, only about twenty per cent. had joined the County Society. He believed a much larger number than this would join the Society if it were brought to their notice, and moved that a standing committee be appointed, to be known as the Committee on New Members, whose duty shall be to watch the registry books and follow up all physicians registering there, with the view of inducing them to become members of this society.

This motion was seconded and carried, and the chair appointed as such committee Drs. Raymond and McNaughton.

There being no further business, on motion, the meeting adjourned.

W. M. HUTCHINSON,  
*Secretary.*



#### HARVEY.

This famous English physician, who is now almost universally accredited with the honor of having first intelligently described the complete circulation of the blood was of a very respectable Kentish family, and born at Folkestone on the 2d of April, 1578.

From a grammar school at Canterbury he went, at the age of fourteen, to Caius College, Cambridge and at nineteen he took the degree of B. A. and quitted the university.

Thence he went to the University of Padua, to complete his medical education under such masters as Jerome Fabricius and the other great luminaries of that, at that time, celebrated school.

It was there, as a student of their discoverer, that he had demonstrated to him the valves in the veins, and his mind was set in the direction of discovering their purpose.

Returning to England, he received a second doctor's degree from the University of Cambridge, married a daughter of Dr. Launcelot Browne, who had been physician to Queen Elizabeth, and settled in London, where he soon became physician to St. Bartholomew's Hospital and lecturer on anatomy and surgery, and it was in these lectures that he worked out and demonstrated his great discovery, though it was not till 1628 that he published his modest book "*Exercitatus Anatomicae de Motu Cordis et Sanguinis in Animalibus*" at Frankfurt-on-the-Main.

He was successively physician to James I. and Charles II., and it was while accompanying the latter monarch on one of his expeditions that his house in London was plundered and a part of the manuscript of his other great work, "*On the Generation of Animals*," was destroyed. This loss he most pathetically lamented for many years.

He died on the 3d of June, 1657, leaving all his property to the College of Physicians, for which he had previously erected a building, and to which he had the previous year presented the deeds of his paternal estate.

The private character of this great man appears to have been in every respect worthy of his public reputation. Cheerful, candid and upright, he lived on terms of great harmony with his friends and brethren, and exhibited no spirit of rivalry or hostility in his career.

He spoke modestly of his own merits, and generally treated his controversial antagonists with temperate and civil language, often very different from their own. He wrote in a remarkably perspicuous Latin style, which is flowing and even eloquent.

Aubrey says of him: "He was not tall, but of the lowest stature, round-faced, little eye—round, very black, full of spirit; his hair was black as a raven, but quite white twenty years before he died."

He rode on horseback with a foot-cloth to visit his patients, his man following on foot, as the fashion then was.

His method of curing the gout, from which he was a sufferer, was peculiar: "When he had the gout, he would sit with his legs bare even in frosty weather on the leads of Cockaine-house (his residence). He would even put them in a pail of cold water, 'till he was almost dead with cold, then betake himself to his stove, and so it was gone."

This portrait is the frontispiece to the elegant quarto edition of his works issued by the College of Physicians in 1766, a copy of which, together with his "*Exercitatus Anatomicae*," etc., Rotterdam, 1664, the writer is happy in the possession of.





# PROGRESS IN MEDICINE.

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## SURGERY.

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BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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### SKIN GRAFTING.

W. Watson Cheyne (Practitioner, London, June, 1890). C.'s procedure differs from Thiersch's in that it aims to transplant the entire thickness of the skin instead of the outer layers. The subcutaneous fat is carefully avoided in the flap to be removed. The strip of skin is cut into small pieces,  $1\frac{1}{2}$  cm. in length, and placed upon the previously prepared defect. The results appear to be very favorable to the method, the skin appearing to be solid.

The objection to the method of C. as compared to that of Thiersch consists in the necessity of repairing the defect produced by the removal of the transplantation strips by suturing or otherwise. It may possibly find application in old leg ulcers.

C. advises that the sponge used for arresting the hæmorrhage from the wound surface be covered with oil-silk protective, in order to prevent renewal of the bleeding when the former is removed.

### RADICAL CURE OF HERNIA.

A. Köchler (Report of Bardeleben's Surgical Clinic, *Centralblatt f. Chirurgie*, 1891, No. 7, p. 139.) A new procedure is suggested to replace the purse-string suture heretofore employed, in which the hernial sac is employed as a "stopper" for the hernial opening. The sac is completely loosened from the spermatic cord, the peripheral end is removed and the balance is slit into three or four strips. These are rolled up separately, with the surface which presented to the wound (the external surface of the sac) outward, and each roll is sutured, to prevent unrolling, by means of catgut; finally, all the rolls, together with the pillars, are sutured together, and the wound is closed by buried sutures. In subsequent cases the rolls were not stitched to the pillars, but were crowded into the abdominal cavity, and the latter sutured over the opening of the ring. The "stopper" should press against the internal ring, but not press into the inguinal canal.

In ten cases a good result was obtained; in one case, that of a laborer, a recurrence took place after a year. A subsequent operation in the latter led, apparently, to a good result.

UPON THE RADICAL CURE OF INGUINAL HERNIA.

Ferrari (*Centralblatt f. Chirurgie*, 1891, No. 3, p. 62). The following modification of Czerney's operation for the radical cure of hernia is advocated by F.: After exposure, isolation and removal of the hernial sac, in addition to suturing the pillars, splits the external wall of inguinal canal to the internal ring; by means of buried catgut sutures, he sutures first the internal ring, and following this, the entire extent of the inguinal canal is closed, with the exception, of course, of an opening for the passage of the spermatic cord. The valve-forming operation of Macewen and Bassini, F. declares to be more or less theoretical.

In a postscript the author says that Bassini, independently of himself, devised the same method, and employed it in two cases.

[In this procedure complete closure of the inguinal canal is accomplished by displacement of the cord.]

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OBSTETRICS.

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BY CHARLES JEWETT, M. D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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SCHEME OF EXTRA-UTERINE PREGNANCY.

Hart (*Ed. Med. Jour.*, April, 1891), in course of a paper on "Displacement of the Placenta in Extra-Uterine Gestation," presents his views of the gross anatomy of extra-uterine pregnancy in the following tabular statement:

1. Ovarian (extremely rare).
2. Primary intra-peritoneal (not proved as yet, and improbable).
3. Fallopian tube: interstitial; in isthmus; in ampulla usually; tubo-ovarian not well demonstrated. From Fallopian tube form we may get:
  - (a) Rupture and intra-peritoneal hæmatocele (first to third month).

(b) Development in tube to nearly full time (exceedingly rare).

(c) Development into broad ligament (intra-ligamentous; sub-peritoneo-pelvic).

(1) Continued extra-peritoneal development, with placenta below; may get living child.

(2) Development with placenta displaced: death of child; sup-puration and discharge by bowel.

(3) Development with placenta below, extra-peritoneal and not displaced; child may escape with or without amnion into peritonæum.

So-called "abdominal pregnancies," *i. e.*, advanced extra-uterine gestation, may arise as follows:

(a) From an early rupture (up to the third month) of a Fallopian tube gestation, the foetus only escaping, the cord remaining un-ruptured, and the placenta remaining and developing in the tube.

(b) Development from Fallopian tube into broad ligament; foetus escaping into peritonæum; placenta remaining behind in extra-peritoneal tissue.

(c) Development of foetus and placenta entirely extra-peritoneally.

#### ON THE METHOD OF VERSION BY ONE FOOT.

Nagel (*Arch. f. Gyn.*, B. xxxix., H. 3). When podalic version was revived some two hundred years ago it was the teaching to turn by both feet. To-day it is the practice of most authorities to turn by a single foot. As to the choice of foot, seizure of the remote foot is practiced by most authorities in dorso-posterior positions. Barnes, Simpson and others prefer the remote foot in all cases. While extraction is possible by either the author gives preference to the remote foot for greater facility of rotation. In all the cases observed by the writer the forward rotation of the child's back when left to nature took place through the longer arc—passing the promontory—never by the shorter route to the side of the pelvis on which the back lies after rotation is complete. This should serve as a guide to the management of cases in turning.

#### INDUCED PREMATURE LABOR.

Bolandin (*Nouv. Arch. d'Obstet. et Gyn.*, Dec., 1890). This paper presents an analysis of forty-three cases of induced labor in narrow pelvis, all conducted under the writer's supervision. In the forty-three cases there were no maternal deaths and no case of post-partum fever. About forty per cent. of the total number of children were lost; but in the last twenty births under better man-

agement there was but one foetal death. The author concludes that premature artificial birth practiced with rigorous asepsis and antisepsis is a favorable operation for both mother and child.

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## PRACTICE OF MEDICINE.

BY HENRY CONKLING, M. D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

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### THE STOMACH IN HEART AND KIDNEY DISEASE.

Purser (The Modern Diagnosis of Diseases of the Stomach) has collected statistics from various sources as to the condition of the stomach in many different diseases. Analyses have been made of the gastric juice and the digestive ferments in these cases. Food that has remained in the stomach long enough to become partially digested has been withdrawn and examined. From these experiments some idea can be obtained as to the best kind of food to be given in diseased conditions. In those forms of heart disease, where more or less congestion of the mucous membrane of the stomach is present, carbohydrates and proteids are digested, while fatty matters are not greatly changed, and are found in the fæces. Six cases of chronic parenchymatous nephritis were examined in which there was found a diminution or absence of HCL; a small amount of lactic acid, and a decrease of pepsin. *It is believed that the stomachic glands excrete urea* and thereby become affected. The inflammation thus caused impairs the digestive agents.

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## OPHTHALMOLOGY.

BY RICHMOND LENNOX, M. D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

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### ETIOLOGY OF CHALAZION.

The usually accepted views as to the etiology of this common form of lid tumor are such as would make it a variety of retention cyst, or dependent upon an inflammation in the Meibomian gland which leads to secondary inflammation and thickening in the surrounding connective tissue.

Tangl (*Beiträg. z. p. Anat. u. z. allgem. Path.*, 1890, vol. ix.; Ref. in Hirschberg's *Centralbl.*, 1891, Jan. and Feb.) considers chalazion as an evidence of tuberculosis. He calls attention to the oftentimes remarkable similarity between the anatomical structure of chalazion and tubercular nodules, and claims to have found the tubercle bacilli in the growth under consideration. Chalazion may be the only manifestation of such tuberculosis, and while more frequent in scrofulous individuals, occurs in persons apparently otherwise perfectly healthy. The benignity of chalazion he would ascribe to the small number of bacilli present, to the local environment of the growth (the firm substance of the tarsus) and to the fact that the tuberculosis is a local one and not an evidence of general systemic infection. He claims that the bacilli reach the tarsus through the blood, and not directly through the conjunctiva or skin of the lid, nor through the lymphatics from an adjoining inflammatory nodule. He therefore considers a tubercular inflammation of the connective tissue surrounding the Meibomian glands as the first step in the development of chalazion, the involvement of the gland and the mucous degeneration as subsequent to it.

#### ON THE COMPARATIVE PHYSIOLOGY OF THE IRIS.

Steinach (*Pflüger's Arch.*, xlvii.; Ref. in Hirschberg's *Centralbl.*, 1891, p. 59) gives the following results of extended and careful observations on the iris movements in vertebrates, and the relation of pupillary reaction to light and optic nerve decussation. In the majority of fishes the pupillary reaction to light is very slow and weak, being distinct in only a small group. It is more extended in the amphibia, especially when the animals have been kept in the dark. In reptiles, and especially in birds, the iris reacts very promptly and forcibly, corresponding in them to the presence of striped muscular fibre in the sphincter iridis.

In all animals with total optic decussation at the chiasma—fishes, amphibia, reptiles, birds, lower orders of mammals (up to rodents)—there is direct but no consensual pupillary reaction. This is also the case in rabbits, in which only optic fibres and not pupillary fibres are found in the slightly developed non-crossing portion of the chiasma. In all such animals with total decussation the two pupil-contracting centres are entirely separate, and the centrifugal pupillary fibres (oculomotorious) are also totally crossed. In animals in which the centripetal fibres (optic) partially cross, the centrifugal do the same. In such there is also a connection between the oculomotorious nuclei by commissural fibres. In such it is easy to see why the consensual pupillary

reaction equals the direct, and why under unequal illumination both pupils are, however, of the same size.

Unilateral reaction does not depend upon separation of the visual fields, as certain animals (owls) have in part a common field of vision with only direct pupillary reaction to light.

The retina is also stimulated by light which comes from the side of the choroid.

#### OBSERVATIONS ON THE VISUAL ACTIVITY OF THE RETINA AND BRAIN.

Angelucci (Giessen, 1890). In the first part of this work the author considers the changes in the "visual epithelium" of the retina and in the retinal pigment cells observed by himself and others up to the present time, and produced by white or colored light. They consist essentially in shortening of the rods and cones (both outer and inner portions) and of the pigment cells, accompanied by a movement of the pigment granules from the bodies of these latter cells into the fringe-like processes extending between the rods and cones to the external limiting membrane of the retina. These movements are in general directly proportional to the intensity of the light, or, when colored light is used, inversely proportional to its wave length; that is, violet light acts more strongly than red. The cones react most strongly. The movements of these three anatomical elements, rods, cones and pigment, are not mutually dependent upon each other (when the rods, for example, are wanting, the other elements react as before), and the disappearance of the visual purple is also independent of these movements. From his observations Angelucci concludes that every portion of the neuro-epithelial layer reacts in a special way to every stimulus of light and color, and shows how various facts which can with difficulty be explained by Young's or Hering's theory are thus more intelligible. The sensation of light and color is excited by motion in the terminal elements; the sensation of darkness by absence of that motion.

Simultaneous, as well as successive, contrast is explained by the assumption that in the neighborhood of an excited portion of the retina—and also in the excited portion after the cessation of the stimulus—a secondary activity (secondary or negative energy) is aroused.

All stimuli which can produce such changes in the light-perceiving retinal elements excite a corresponding sensation of light. In the frog the above changes occur whenever an irritation of any kind affects the retina (pressure on the globe, defective nutrition, heat, strychnine, electrical stimulus); also, in consequence of

reflex action from excessive stimulation of other nerves (faradic or galvanic currents, loud sounds, concussion, etc.). Irritation of one retina will also produce a reflex stimulation of the other.

The movement of the pigment is of importance in adaptation.

The author brings further material in support of the at present generally accepted view that uncrossed fibres in the chiasma first appear in the rabbit, and that their number in proportion to the crossed fibres increases up to man, in whom there is an almost equal division into crossed and direct fibres. His observations in regard to the central termination of the optic fibres lead him to believe that all portions of the optic ganglia are connected, not only laterally, but also with each bundle and each central root of the optic nerve.

Lastly are considered the visual capabilities of the cerebral cortex in the higher vertebrates, and here the author discusses the different views as to localization. The cerebral visual centre has first to perceive the centripetal stimulation; secondly, to bring this perception to consciousness. The first process is accomplished by the optic ganglia; the second, that of conscious vision, by the cerebral cortex. The latter faculty is nearly special to those animals with developed cerebral hemispheres. Animals below mammals in the scale possess to but slight degree a capability of interpreting visual impressions, and see about as well without the cerebral hemispheres as with an intact brain (experiments on pigeons). They adapt to their visual sensations in a reflex way whatever acts and movements they are capable of after destruction of the hemispheres.

Angelucci believes with Goltz that the cerebral visual centre is not limited to a circumscribed area, and ascribes to the posterior lobes only a special importance. Only in the absence of all vital activity of the cortex (dog) is this psychical vision lost. Should actual diminution of visual activity occur after injury of the cortex, it is to be referred to secondary action (irritation—descending degeneration).

In a similar way can one explain the cases of complete hemiopia in man with localized disease of the posterior lobe. They are due to indirect action upon the centres of simple vision in the basal ganglia. The cases of hemiopia with very extended changes in the posterior lobes, in which the blind halves of the retina are still sensitive to light, support this view.

In pathological changes in the centre of visual memory, this memory always suffers as a whole, those impressions being least affected which are ordinarily most easily reproduced by the brain.

Many cases of psychical blindness are thus more intelligible than by the acceptance of a functional disturbance limited to certain special groups of cells.

A psychical impression in man is usually the result of the combined action of different centres, and such psychical processes need no special cortical centre. It is, therefore, inadmissible to create or presuppose a special cortical centre for special acts, such as reading.

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## DISEASES OF THROAT AND NOSE.

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BY WM. F. DUDLEY, M. D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

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### INTRINSIC CANCER OF LARYNX TREATED BY THYROTOMY.

J. Dundas Grant (*British Med. Journal*, March 28, 1891). This operation, performed six months ago, has so far proved successful. The patient, aged fifty years, in December, 1889, had cold, followed by hoarseness, increasing to complete loss of voice, no cough or difficulty in swallowing or breathing until July, 1890, when a shooting pain was complained of, extending to left ear.

There was also a slight fullness of left ala of thyroid cartilage.

Laryngeal examination showed a nodular mass of red color entirely replacing the left vocal band. It involved ventricular band also, and extended beyond median line and apparently below the glottis. A section of neoplasm under microscope showed a typical formation of nest-celled stratified epithelioma.

The operation of tracheotomy was performed, followed by thyrotomy, the angle of thyroid cartilage divided and alæ separated. As the right ventricular band and vocal cord showed evidences of involvement, the entire contents of interior of larynx were removed by raspatory and blunt-pointed scissors. The cartilages were scraped bare, thoroughly scrubbed with a solution of chloride of zinc, and iodoform dressing applied. Anæsthetic used was chloroform. Patient rallied well; feeding accomplished through a Jaques rubber tube. Large quantities of blood-stained mucus expectorated following day. Temperature at no time after operation rose above 101.8°. Every four hours twenty drops of solution, 1 in 1000 hydrarg. binioidide, administered. A few moist



rales heard over left base, which disappeared in a few days. Improvement in condition steady, and patient discharged in less than four weeks after operation. Laryngoscopic examination then disclosed a healthy looking mucous membrane covering larynx, with a projecting fold of lining membrane in right side which moved on phonation, and on opposite side a cushion-like pad covered with normal mucous membrane. The after treatment was important in insuring a satisfactory result. In packing and dressing, iodoform and alembroth gauze was used; frequent administration by mouth and drainage-tube was made; the air respired by patient was impregnated with steam charged with eucalyptus, and nourishment was given both by mouth and in rectal enemata.

Six months after: no recurrence, no glandular swelling, no pain, no sign of ulceration.

Owing to the projections of membrane on side of larynx, the patient can phonate in gruff whisper. Respiration and deglutition perfect.

#### LARYNGITIS IN VOCALISTS.

R. B. Faulkner (N. Y. Med. Jour., April 11, 1891). The following method is advocated to enable a vocalist to use the voice temporarily when suffering from a subacute laryngitis: A laxative first given. The larynx then sprayed with cocaine, one per cent., and aconite and aromatic spirits of ammonia administered internally. Also this lozenge used several times daily:

℞	Morphiæ	-	-	-	gr. $\frac{1}{100}$
	Cocaine hydrochl.,	-	-	-	gr. $\frac{1}{125}$
	Tinct. aconit.,	-	-	-	℥ $\frac{1}{6}$
	Rad. althæ. rad.,	-	-	-	gr. $\frac{1}{2}$

M.—Take one trochee.

If the more acute symptoms subside under this treatment, strychnine is then given, and the effect in restoring the voice, it is claimed, is brilliant and prompt.

The morning upon which the voice is to be used in public, strychnine, one-sixtieth grain, is given after breakfast, repeated after mid-day meal; in afternoon and before departing for concert, the twentieth to thirtieth is given. These are directions for an adult man. Strychnine salts enter the blood rapidly. The laxative depletes laryngeal vessels, the spray quiets the irritation, and the lozenge allows for the affected parts, as far as possible, physiological rest.

Strychnine stimulates motor and vaso-motor centres of spinal cord. It strengthens heart's action, increases arterial tension, promotes capillary circulation and relieves congestion. The use of wine for stimulating voice is deprecated. The use of strychnine in this paper is advocated only in cases of great emergency.

#### ETIOLOGY, PROGNOSIS AND TREATMENT OF EXOPHTHALMIC GOITRE.

Jacconel (*Jour. Laryngology and Rhinology*, March, 1891). Two main etiological factors: 1, mental emotions; and 2, heredity. Prognosis very grave; disease fatal in about one-fourth all cases.

Death is due to marasmus caused by incessant cardiac activity from digestive troubles, albuminuria and glycosuria. In anæmic conditions administered iron; but this drug is harmful if anæmia be absent or if disease be far advanced. Hydro-therapeutics and electricity are of greatest value.

The douches should be tepid at first and become gradually colder; applications made daily and of short duration at first.

The best form of electricity is that of weak continuous currents to both sides of neck.

Charcot recommends the faradic current at neck with galvanic to præcordial region at same time. Arsenious acid, bromides and ice are of use. Ice should be used with great caution, as it may cause sloughing if left too long in contact with distended thyroid body.



## GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

### TREATMENT OF UTERINE FIBROIDS.

Goodell, in "Medical News," in a clinical lecture on uterine fibroids, remarks that it is a disease which rarely kills. In arriving at a conclusion as to the advisability of an operation, he considered, first, the annoyance and pain the patient suffered, and after deciding the removal of the uterus was not demanded, considered the propriety of oöphorectomy.

By this method the supply of nutrition to the uterus was likely to arrest the growth.

If for any reason the risk of operation was not taken, the most efficient medical treatment was that of ergot and chloride of ammonium. The former would diminish the blood-supply by its influence on the blood-vessels through the influence of the vaso-motor system; the latter by its absorbent influence.

As fibroids are fleshy tumors, they increase in size slowly; if late in life—when the menopause is deferred—they may become fibro-cystic or cancerous. He had never met with an instance of the latter case.

The financial circumstances of the patient have a bearing on the method of treatment adopted. If she is not well off pecuniarily, so that she can command a life of ease, he generally advises removal of ovaries.

#### ABUSE OF LOCAL APPLICATIONS IN GYNÆCOLOGICAL PRACTICE.

In "Galliard's Medical Journal" for February, 1891, Dr. Leake, of Texas, speaks of the injury done by indiscriminate local applications in gynæcological practice. It seems to have grown out of the since exploded pathological theories advanced by Bennet many years ago.

As a rule, neither a redness of the os nor a gaping laceration of the cervix calls for the use of caustics or other strong applications; much less should they, on slight provocation, be thrust into the cervical canal. The danger seems to lie in a narrowing of the uterine outlet, "which now, indeed, becomes a Utica of the practitioner's own making."

There is such a variance of opinion regarding the admissibility of intra-uterine applications that it is very difficult to get at the general feeling of the profession on the subject. This is due to opposing pathological views: one asserting, the other denying the occurrence of any intra-uterine inflammation—properly so called—to be treated.

L. advises that applications to the cavity of the uterus be not made more often than once a month—never using destructive agents, such as nitric or chromic acid or the actual cautery.

He agrees with Mary Putnam Jacobi, that the most dangerous time of all for invading the uterus is when the menstrual flow is impending, or when the organ is displaced, so that a free exit for the injected fluid is not permitted.

Even the hot vaginal douche may cause more harm than good, if long continued, by causing rather than curing the relaxation of the parts. It is sometimes to be avoided, also, in pelvic cellulitis, ovaritis and salpingitis.

## CASES OF AMENORRHEA FROM UNSUSPECTED ABSENCE OF UTERUS.

Manton (*Annual of Gynæcol. and Pæd.*, March, 1891). A strong, healthy-looking American girl, aged twenty-two, and married three years, not having conceived, consulted a physician, who, without examination, advised her to wait two years and seek medical advice.

She had never menstruated, but for four years, at intervals of five weeks, had cramp-like pains, bearing-down sensations, accompanied with headache and swelling and tenderness of breasts.

There was no abdominal enlargement nor history of vicarious menstruation of leucorrhœa. External genitals well formed.

Distending of vulvar fissure revealed only a slight depression, and where the fossa navicularis should be found was a canal three and one-half inches deep.

Rectal and bimanual examination, with sound in the bladder, shows the ovaries normal in size and position, but no trace of vagina or uterus.

Neither husband nor wife was cognizant of the abnormality; but the husband acknowledged that the artificial vagina was formed as a frequent result of attempts at intercourse.

He reports a second case of this rare condition in a girl, who claimed to have menstruated slightly a few times. She had led an irregular life, although the vaginal cul-de-sac was not more than two inches deep.

The author, after certain conclusion as to the treatment of amenorrhœa, says that indiscriminate prescribing, without a clear knowledge of the conditions present, may react upon the physician to his mortification and chagrin.



## MEDICAL JURISPRUDENCE.

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 BY SIDNEY V. LOWELL.
 

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 WAS IT ACCIDENT OR DISEASE?
 

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A new and interesting question in medical jurisprudence has recently been raised, discussed before our courts and brought to a final decision, so far as this State is concerned. It is this: Is death from a malignant pustule, contracted by the contact of the

outside of the human body with some source of infection, a death from accident, so that a death loss follows, as against an accident insurance company? It has been held that it is not.

Frederick J. Oaks, a resident, at his decease, of Council Bluffs, Iowa, had been for some time before his death insured against bodily injuries, effected through external violent and accidental means and not from disease, in a sum not exceeding \$5,000, by the United States Mutual Accident Association of the City of New York, to be raised by assessment upon its members, in case of the death of the assured and paid to his mother.

He went to Council Bluffs from the eastern part of Massachusetts. He had resided at the former place for only two months before his death. He was first employed as a bookkeeper in a meat-market, and later as a check clerk in the transfer department of the Union Pacific Railroad.

In some unknown way he became afflicted with a malignant pustule, which formed on his lip and from the effect of which he died.

The reasoning of the plaintiff's attorney was, that the pustule was the result of an external injury, accidentally received; that the pustule, which fastened on his lip, came suddenly from the outside; it was not a disease and death was therefore effected through accident. The case is considered in its strongest light for the claimant, viz., that the pustule came from external contact, as, from its being on the lip, might fairly be inferred.

The surface facts proved were these: That car-loads of hides frequently passed the railroad station where the insured was employed, and that a large number of cattle are brought there and slaughtered in the vicinity.

There was no direct proof that the deceased ever came in immediate contact with the hides or flesh of those animals or swallowed anything affected.

This was followed up by the testimony of a number of physicians on the nature of the deceased's affliction.

The leading medical witness was Francis A. Harris, M.D., of Boston, Mass., professor of Boston Dental College, medical examiner of Suffolk County, Mass. and demonstrator (medico-legal) at Harvard Medical School. His testimony was very elaborate, and to the effect that a case of malignant pustule is not a disease, in the strict sense of the term, but a pathological condition of the system, caused by the accidental infliction of diseased or putrid animal matter, infested with bacteria or anthrax, bacilli upon the thick skin of the lip, whence the bacilli multiply and are diffused through the

system. The animal virus that produces the sore comes from the hides, hair, wool or flesh of animals suffering from the disease known as anthrax, it may be transmitted to human beings directly by the immediate contact of the individual with it, by his touching or handling it and then bringing the matter in contact with the skin or thin mucous membrane, or it may be carried by carrion birds or by insects and in various ways communicated to man, or implanted upon some exposed portion of the body. People whose business requires them to handle hides, hair or wool and who live in cattle-grazing regions, are more exposed to malignant pustule than others. Wherever the human body comes in contact with the diseased animal matter which is in the condition to infect it, it produces at the point of contact a papule, something like a flea-bite, which rapidly becomes a vesicle—a blister-like affair, then a pustule, with this coming swelling, pain, prostration and death from exhaustion—the end usually being in five to eight days, the extreme limit being from twenty-four hours to sixteen days. It has been called the wool-sorters' disease, because persons that handle wool and hides are so subject to it.

Dr. Harris, in speaking of it, said that there had been some epidemics noted in America.

Judge Peckham, an extremely acute reasoner, who wrote the prevailing opinion of the Court of Appeals, seized upon that word "epidemic" and made a good deal out of it, claiming it was entirely inconsistent with the "accident" theory.

Dr. Wm. H. Bailey, of Albany, supported the same view as to the pustule being a "pathological condition" rather than a disease.

Drs. John Swinburne, John M. Bigelow and George H. Houghton, of Albany, were also called for the plaintiff.

The result of the trial, which was had before Justice Osborn, of the Supreme Court, at Albany, was a verdict for the plaintiff.

The defendant had claimed that the sore was a carbuncle, in any event that the death was not from accident, but by disease. To substantiate this theory, it called from Council Bluffs Dr. P. J. Montgomery, surgeon for two hospitals there and for the Wabash Railroad and read the deposition of Dr. Walter D. Stillman, from the same place. It also called Dr. Reid B. Bontecou, of Troy, N. Y., surgeon to the Marshall Infirmary and Dr. T. M. Prudden, of New York City, director of the laboratory of the College of Physicians and Surgeons and pathologist to the Board of Health and at Bellevue Hospital.

The trial judge charged the jury that if it was a carbuncle, the plaintiff could not recover; but that if it was a malignant pustule, he could. The verdict of the jury was conclusive that it was a pustule.

In the Court of Appeals the principal case relied on as a precedent by the plaintiff was the recent one of Paul *vs.* The Travelers Insurance Company, in which it was decided that Paul, who was a guest at the Sturtevant House and died there from the involuntary inhalation of illuminating gas while asleep, met his death through an accident within the meaning of an accident insurance policy.

The Court of Appeals divided in this case on the question involved, Judge Peckham leading the majority, including also Judges Andrews, Earl, Finch and Gray; while Judge O'Brien wrote a dissenting opinion, which was concurred in by Chief Judge Ruger.

The judges on both sides considered the Paul case, Judge Peckham arguing that the latter case was like death by drowning; that neither produced a disease, but sudden death without disease and from causes without the person or control of the sufferer; that from the evidence of the expert physicians called for, the plaintiff showed clearly to his mind that death from pustule was regarded generally by the medical world as death from disease; that the definition given by them as to the difficulty being "a pathological condition of the body and not a disease, is upon these facts entirely too fragile to base a recovery upon."

Judge O'Brien considered in the dissenting opinion, that the case was identical in principle with the "Paul" case and "that the infliction of animal virus by some exterior force or power" "was a bodily injury effected through external, violent and accidental means."

In this case, where the judges of the court of last resort were so divided, this journal may express the opinion of the writer, that the view of the majority of the court is the correct one; that the cause of death, while in its nature somewhat accidental, was yet from a disease; that a recovery could no more properly be had than if the insured had inadvertently passed through a hospital filled with persons sick with scarlet fever or small-pox and had contracted by infection either of those diseases.

## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.*

DIABETES: Its Causes, Symptoms and Treatment. By Dr. Purdy.  
No. 8 in the Physicians' and Students' Ready-Reference Series.  
Philadelphia, 1890: F. A. Davis.

In a book of 184 pages Dr. Purdy discusses the above disease. Diabetes is a disease which in late years has been so thoroughly studied that any book written after the fashion of works on general medicine will contain little new information. The latest therapeutic notes on the disease are those by Dujardin-Beaumetz, a review of which has already been given in this department. It would be extremely interesting for some one who had watched a large number of cases of diabetes to analyze them as far as mode of onset, symptoms, age, position, etc., are concerned. This would form a basis for the further consideration of individual cases. In the present volume the author has recorded the daily histories of a number of cases, without an extended analysis of the series as a whole.

On page 47 may be found the author's definition of diabetes: Thirst, polyuria, lowered temperature, emaciation and certain nervous disturbances may be considered the classical features of diabetes. The work in general is divided into eight sections, which discuss the history, pathology, etiology, symptoms, treatment, illustrative cases, lastly an account of diabetes insipidus.

The only points of especial interest are the "geographical considerations" in which much new matter is brought forward.

It appears that in the year 1880 there were in this country 1,443 deaths from diabetes, being a ratio of 1.90 for every 1,000 deaths. More deaths occurred in the North than in the South. Vermont gave a ratio of 6.36 for every 1,000 deaths, while Alabama gave but .55 for each 1,000. The two great causes in making this difference are *cold and altitude*. Atmospheric pressure, the amount of oxygen in the air and oxidation, all have an important bearing upon the clinical history of diabetes.

The regions in this country where a diabetic patient may have all the good that comes from climatic treatment are to be found in the Southern States. The author calls attention to the fact that the food products of these regions are most suitable to the requirements for proper diet.

On page 57 is an account of diabetic coma, which the author has found in many cases to be fatal. Recovery is not usually to be hoped for. The prodromata vary in different cases, and it is to be noted that the respiration and pulse-rate do not correspond with the coma of cerebral hæmorrhage, both being more rapid. The cause of the coma may be either acetone, producing a poisonous effect, or the poison of ptomaines. This is the author's own theory. The great waste of bodily tissue and the frequent imperfect action of the organs of excretion aid in the formation and absorption of waste products. For the treatment of the coma the author recommends sodium carbonate, vapor baths and oxygen gas. This portion of the subject is imperfectly



treated. A practical hint can be given here. It is well to recollect that comatose conditions are not all due to hæmorrhage in the brain, and to add "diabetic" coma to the list of possible causes in all unconscious states.

Section seventh is devoted to the recorded notes of certain cases. We have compared, by making a copy from the notes, the specific gravity and the amount of sugar, and while these figures differ from certain other lists, they are not positive enough to prove that a high specific gravity means diabetes. Again, a low specific gravity does not always indicate a small amount of sugar in diabetic urine. In one of these cases, where the specific gravity was 1033, the percentage of sugar was 3: in another of 1028 specific gravity, it was 4. The only scientific way of arriving at definite conclusions is to make the estimation of the solid ingredients a matter of routine examination, quite as much as the examination for albumen and sugar.

HENRY CONKLING.

### THE YEAR-BOOK OF TREATMENT FOR 1891. Philadelphia: Lea Bros. & Co.

This work contains an exhaustive summary from medical and surgical literature upon cases, theories, experiments and therapeutics. From this five selections are here given:

1. *The iodide of potash* is considered by Germain Sée as an excellent heart stimulant. It dilates the arterioles, energizes cardiac action, and has an effect on the coronary arteries. The sodium salt has no such power.

2. *Bronchial asthma* may be treated by a solution of cocaine applied to the nose: cocaine, hypodermically; iodide of potash, belladonna, arsenic; lobeline in doses of three-quarter grain to six grains; antipyrin, quebracho; nitrate of sodium in doses of three to five grains; nitro-glycerine, strychnine, atropine.

3. *The night-sweats of phthisis* may be treated by camphoric acid; agaric acid in doses of one-sixth grain; potassium tritrate, and an *ice bag* over the abdomen. (This latter would be an agent to be regarded as a medical curiosity rather than an addition of value to therapeutics.)

4. *Chorea* in a severe form was treated by Dr. Bastian, of London, by "prolonged sleep." The patient was kept under the influence of chloral and bromide. Food was regularly given (when the patient was awake). The cure required one month.

5. *Ehrlich's test* is used for diagnostic purposes in typhoid fever. There are two solutions:

1. Acid hydrochloric, C. P.,	-	-	-	1 part.
Distilled water,	-	-	-	20 parts.
Sulphonitic acid,	-	-	-	q. s. (to saturate).

2. Solution of nitrate of sodium (one-half per cent.).

These solutions are to be mixed: 25 parts of No. 1 to 1 part of No. 2. Equal parts of urine and this mixture are to be put in a test tube; liquor ammonia (strong) is to be added, in amount enough to give alkaline reaction. A ruby color results; upon agitating the tube "a delicate pink froth occurs." *This is never absent in typhoid fever.*

HENRY CONKLING.

THE POST-GRADUATE CLINICAL CHARTS: Designed for Use in Hospitals and Private Practice. Arranged and published by Wm. C. Bailey, M.D., Instructor in Clinical Medicine, Post-Graduate

Medical School and Hospital, E. D., N. Y., and J. H. Linsley, M.D., Prof. Pathology and Bacteriology, Medical Department, University of Vermont, etc., 1891.

These charts were designed for use at the Post-Graduate Hospital, and we presume they have given satisfaction, as the practical position occupied by the authors must have furnished ample opportunities for submitting them to a severe test. They seem to cover all the data which it is desirable to record. The charts are published in book form, at the small cost of twenty cents for each book, which is so arranged as to keep the record of one case for eight weeks. They can be obtained in any quantity of Dr. Linsley, at 226 East 20th Street, N. Y.

#### TWELVE LECTURES ON THE STRUCTURE OF THE CENTRAL NERVOUS SYSTEM.

By Dr. Ludwig Edinger. Translated from the second German edition by W. H. Vittum, M.D., of St. Paul, Minn., and edited by C. E. Riggs, M.D. Philadelphia, 1890: F. A. Davis. Price, \$1.75.

The present edition of this work, in comparison with the first German, has been increased from 138 pages to 225. To this is also added a needed index. Various matters—as, *e. g.*: Starr's table for spinal localization and his arrangement of the nuclei for the ocular muscles—are introduced exclusively into the American issue.

The merits of this work, as an admirably clear, brief presentation of our knowledge in this field, especially from the standpoint of the Flechsig school of investigators, are well known to neuro-anatomists and teachers. Technical methods are but briefly considered. Conclusions in pathology, rather than physiology, are pointed out as corollaries.

The English rendering and the corresponding part of the printer's work are highly creditable. But the value of the book depends greatly on the abundance and instructiveness of its illustrations, and of these it must be said that, although still good, the reproductions are somewhat below the standard of the original.

Wherever the first plates carried German terms, they are so retained, as of course the more frequent Latin words. It is amusing in an English book to see the posterior columns labeled "Hinterstränge," and the cortical centres "Rindencentren." But as these terms, when important, are explained or translated, no serious objection need be made to them.

We are glad to recognize this as an indication that our colleagues of the new Northwest can appreciate high-class medical work, and propose to share in its advancement.

WILLIAM BROWNING.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By W. A. Hammond, M.D., with the collaboration of G. M. Hammond, M.D. Ninth edition, 118 illustrations, 932 pages. New York, 1891: D. Appleton & Co.

A medical work that has gone through nine editions in twenty years must certainly have acquired great prestige; but this very fact may serve to keep afloat a work no longer adequate to the time. Hammond's original treatise

was perhaps the first general work published by any American neurologist, and as such now possesses great historical interest. So far as bulk is concerned, it still remains the greatest. We might go further, without atoning for its faults, and acknowledge that, in view of the large mass of clinical material introduced, and in the absence of any very satisfactory separate work, this is still one of the most available for the general practitioner. Many special articles in Pepper's "System," in Starr's book, in the writings of Seguin, and scattered through the journals, indicate the quality of workmanship that is needed.

Though the present issue of Hammond has "been thoroughly revised" (forty-nine pages more than in the sixth edition), the old wording and even statistics of cases have to a large extent been retained unchanged.

The long-comings of the work—if the expression be pardoned—are quite as objectionable as its short-comings. There is at almost all points a certain watery diffuseness, admissible possibly in a journal article, but here suggestive of padding.

On the other hand, there are omissions and faint mentions unpardonable in any treatise pretending to be comprehensive. If instruments and methods of examination are to be considered at all—and a dozen pages or more are devoted thereto—then some directions ought to be given for the determination of hearing, smell (resp. anosmia, as by the olfactometric methods of Lewaarde-maker and of Ottolenghi), therm-æsthesia, the muscular sense, homonymous hemianopsia, Wernicke's pupillary reaction, etc. Of these no mention is made in the general portion of the treatise, and in fact they are either not mentioned at all, or treated but shabbily. Yet such matters are of far greater moment than, *e. g.*, the large cut of a Holtz machine.

To such a relatively important trouble as multiple neuritis less than two pages are given—though this lack is partly remedied under "Toxic Diseases"—while some fifty pages are taken up with such uncertain matters as cerebral hyperæmia and anæmia. Nerve-surgery and cerebral localization receive the scantiest minimum of attention. Somewhat noticeable, also, is the ignoring of work done by Americans—unless protégés of the author.

It may be too much to ask of any single writer that he treat this field comprehensively, yet if any one essays the task, he must not expect to escape accountability.

WILLIAM BROWNING.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE: For the Use of Physicians and Students. By James Tyson, M.D., Professor of Clinical Medicine in the University of Pennsylvania, etc. Seventh edition. D. c., pp. 255. Philadelphia, 1891: P. Blakiston, Son & Co.

This work is too well known to require any special notice. It differs but little from previous editions, except that some inaccuracies have been corrected, and some tests, which had been regarded as very valuable, have, in the light of more recent experience, been given a less prominent position than in previous editions.

# CORRESPONDENCE.

## BERMUDA.

BY J. B. MATTISON, M.D.

*To the Editors of the BROOKLYN MEDICAL JOURNAL :*

Seven hundred miles from Brooklyn lies a land quite unfamiliar to most Americans, yet having within its borders much to charm, and, above all, possessing in large degree that which nature has provided to restore those giving way before our over-active life.

Bermudians assert their climate the most equable in the world, and temperature tables, high and low, largely support this claim, the record for 1889-1890, as compared with several other winter resorts, being :

	<i>Nov.</i>	<i>Dec.</i>	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>
Bermuda.....	77-62	73-58	71-50	72-49	72-50	74-56
Los Angeles.....	82-43	68-40	67-34	81-35	81-40	94-42
San Diego.....	83-46	69-40	66-35	77-38	74-41	85-45
Jacksonville.....	86-30	80-35	80-40	83-44	85-27	88-47
St. Augustine.....	84-35	76-43	79-43	81-45	87-28	86-51

The present season has been : Nov., 79-56; Dec., 73-51; Jan., 71-48; Feb., 74-52; Mar., 72-49. As a rule, November, April and May are most agreeable. During December, January and February last, however, the weather most of the time was charming. March is the worst month, when east winds, low barometer and thermometer and frequent showers are apt to prevail. The porous soil admits of outings soon after a heavy rain. As in England, mornings often betoken a stormy day, but the clouds roll by to a beautiful afternoon. July and August for the "outside barbarian" are not to his liking; and September, with its sultry, breezeless days, is most oppressive of all. May and June, as regards climatic conditions and the floral beauty of forest and field, offer special attractions; but fashion at present decrees that during March the full tide of travel shall crowd steamers, hotels and boarding-houses to discomfort. The highest pleasure in these sunny isles will never be found till this senseless fad has had its day.

These islands, once called the Isle of Devils, were discovered in 1515 by Juan Bermudez, and, though many in number, only the five largest are tenanted. Their shape is that of a shepherd's crook; their area about twenty-one miles. They form a ring of coral reefs round a lagoon, the coral structure resting on a submarine mountain of volcanic origin—a lonely cone rising three miles from the ocean bed. Until the placing, last summer, of the cable to Halifax, they formed the most isolated spot on the globe, save, possibly, St. Helena. The population is 16,000, of which three-fifths are black. Hamilton, the capital and leading town, contains 2,000.

The soil is red and rich—composed of peroxide of iron, alumina, silica and earthy phosphates—and, fertilized, is largely productive. The climate being semi-tropical, vegetables and southerly fruit abound. The former comprise all known in our northern gardens, the onion, of course, leading the list. This typifies the acme point of Bermudian excellence, according to Mark Twain, who declares that the fond Bermudian father, sending his noble scion of a noble sire out to battle the world, breathes a parental blessing, and—as tending towards the highest attainable—this parting injunction: "My son, be an onion!"

The houses in Bermuda are, almost without exception, built of coral, white, and so soft that it can be cut and trimmed by saw and chisel, but promptly hardens on exposure. The roofs are thin slates of the same material. These are annually whitewashed, and, rising mid their emerald surroundings—the islands are perennially green—give a charm to the landscape that must be seen to be appreciated. Each dwelling is required by law to be provided with a tank for rain water taken from the roof, which, with the yearly whitening, insures its purity. There are wells, but the water is too brackish to drink. Last year the supply was largely increased by several artesian wells, the water of which is good.

Of fruits, bananas, oranges, lemons and the paw-paw are most abundant. The bananas are of the yellow sort—sweet—but too small to compete in northern markets with those from more southern climes. The oranges and lemons are too inferior for use. The paw-paw is essentially a local delicacy, mostly used by the natives. There are no apples or peaches. There is a cherry, but it is not toothsome. On a former visit, in January, strawberries were abundant and good. Since then their culture has largely fallen off; but it has been thought that, with selected plants, extra care and added market facilities—quicker transit and cooling rooms on the steamers—they might be made an export of no little

value. So, too, might the valleys and sheltered places produce figs, pineapples and other fruit; but the Bermudian planter seems to let his ambition tend mainly to potatoes and onions.

The cedar is *the* tree of Bermuda; but the palm-tree, the palmetto and bamboo rearing their stately heads, vary forest and field. Flowers bloom the year round, roses—some of which are found only here—the most. The oleander and geranium, fullest in May and June, hedge the highways. Lilies, at best in April, fill whole fields, making a picture beautiful and unique. The varied floral adornings, and so abundant, form one of Bermuda's greatest charms.

The health of these islands is almost always good. A healthy October presages a healthful winter. There has been no epidemic since 1853, when yellow fever made havoc—sparing neither sex, state nor condition. A sort of pessimistic writer hinted last summer that enteric fever was rather rife, but it was not true. The greatest mortality is under five, and, among the blacks, largely due to neglect. Long lives, 85 to 95, are not uncommon. There are nine resident registered medical men, all graduates of American colleges except two—Dr. Eldon Harvey, M.R.C.S., L.R.C.P., England, and Ettore Sarzana, M.D., Italy, L.S.A., London. There are ten army and five naval surgeons. There is a branch of the British Medical Association, before which the writer, by invitation, had the honor of making an address on narcotic inebriety. A general board of health is composed of the governor and council—the latter, nine, leading non-professional men of the colony. There are two health officers—a post-surgeon at St. George and a local physician at Hamilton; services paid by fees. Two coroners, non-medical men, are paid in the same way. Gaol surgeons at these places get \$200 per year. Quarantine regulations are careful and complete.

The insane asylum here is a large building, once intended for college purposes, and contains forty beds. The attending physician is Dr. Hinson, the senior practitioner of Bermuda—salary \$1,100.

Through the effort of Dr. Harvey, a handsome hospital cottage has been erected about half a mile from Hamilton. It may prove of much value should contagious disease occur among visitors. Nine-tenths of its cost was given by Americans. Great credit is due to Dr. Harvey for this good work. A new army hospital is being constructed at Camp Prospect, the central military post, two miles from town. It will admit one hundred.

The leading death cause is tuberculosis, mainly among the blacks. Forty cases occurred year before last; 40 last year. The

mortuary report for 1890 included, debility 25, enteric fever 20, heart disease 20, whooping-cough 20, diarrhoea 18, pneumonia 15, old age 14, tetanus 10, still-births 28. There is much rum drinking, but little open drunkenness. There were two deaths each from alcoholism in 1889 and 1890.

Births and deaths are fully recorded. The former lead, making an annual increase in population—last year 241. Death certificates are not prerequisite for burial, but must be presented within a fortnight. The illegitimate births are many—during the last decade 953, of which 909 were black. The number last year was 84, the lowest, save once, since registration was adopted, twenty-five years ago—a hopeful index of bettering morals among them. There are six drug-stores—one of them at St. George, twelve miles from Hamilton. Druggists are not examined. Any one, on payment of five shillings, can set up shop.

Climate has been thought, hitherto, the leading remedial factor for invalids in Bermuda, but a new Richard has lately entered the field. A band of Kickapoo Indians (?), made up of half-breeds and others from Quackland and elsewhere, swooped on the islands—an unheard-of visitation—some weeks ago. They pitched their tent hard by the town, posted walls and waste places with pictures of the noble red man in various attitudes of samaritan ministrations, “laid low” during the day, and at night, by dint of so-called music, tight-rope antics, acrobatic acts, juggling feats and other “fetching” performances, drew the dusky natives in droves, and actually depleted them of \$1,500 in one week—a big amount for those no better off in the world’s wares than they are. Having dearthed this field, they stole away to St. George, worked that place for all it was worth—to them—and are now at Somerset for a season, after which they purpose a parting raid on Hamilton, and then set sail for the land of wooden nutmegs, whence they came.

An event so rare as to be the only one in the annals of Bermuda, was the recent trial—on an indictment for manslaughter for the alleged killing of a patient by overdosing with opium and belladonna—of one of the two colored physicians. The facts, as brought out at the inquest and trial, were that the doctor was called to a middle-aged colored man, ill with painful bowel obstruction, and prescribed :

℞ Tinct. opii,  
 “ belladon.,  
 Spts. chloroformi,  
 “ ammon aromat.,                   aa gtt. v.

to each teaspoonful, with instructions to repeat every ten minutes till relieved. This was repeated, more or less regularly, and—to shorten the story—in thirty-six hours the man was narcotized, and, in forty-eight, gathered to his fathers. The doctor, a very intelligent-looking fellow, graduate of a western medical college, frankly stated in his certificate that death was due to bowel obstruction and over-dosing with opium; but the gossips got in some fine work, a hue went up, and an indictment followed. He plead not guilty. Expert evidence for the prosecution was given. A question by a juror disclosed the fact—vital for the defence and made the most of by his counsel—that the teaspoon used held nearly double the usual amount. There was little question that the man died from narcotic poisoning, but the evidence failed to prove criminal lack of medical care. The trial lasted five days. The jury was out twenty minutes. The doctor was acquitted.

It seems to us strange more medical men do not visit Bermuda. We have noted less than a dozen, and most of these from Brooklyn. Physicians might well set their patients an example in this regard, and by so doing induce many more to spend an outing here. The fact is, few realize that less than sixty hours from Brooklyn is a lovely land, an evergreen isle, where roses bloom the year round out of doors, and the high tide of rose time is December; where malaria never comes; where frost and the white mantle of winter are unknown; and where the sleep-giving, health-bringing breezes, the panoramic beauty of sea and shore, and the quiet, restful life, combine to make halcyon days.

For insomnia, Bermuda is unique to do good. It is not the place for consumptives, nor for one far advanced in any wasting disease. It is a happy land for the neuralgic, and those coming back to health from acute disease. For the weary and worn, for the tired pilgrim along any line—be it brain or brawn—it is indeed a Mecca to which he may go with high hope of getting rest and relief.

Bermuda is, too, good for those not ill. Let the busy Brooklyn doctor take a fortnight off, and a ten-days sojourn in these sun-lit isles, and our word for it, if conditions favor, he will lay in a stock of happy memories for many days to come.

The writer has been presenting a series of letters from Bermuda in a Brooklyn daily. One object was to induce those who might read them to visit this favored land. He will be glad to tell any one what he knows about this charming resort, and if, in so doing, more of his confrères shall share in the pleasures he has enjoyed, he will be content.

*Hamilton, Bermuda.*

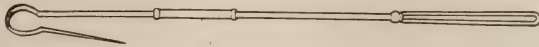


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 THE "HARPOON SPONGE HOLDER."
 

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The "harpoon sponge holder" (a cut of which is here given) consists of a stiff metallic stem terminated by a straight, sharp-pointed hook. It has upon it a sliding tube, and is surmounted by a metal handle. Its entire length is twenty-five cm.



The sponge or gauze to be used is placed upon it, as bait is applied to a fish-hook. When in place, the sliding tube is slipped over the sharp point up to the sponge. (It is easier to place the sponge while dry.)

It is needless to say that the annoyance consequent upon the slipping and twisting of sponges during an operation is prevented by the use of this sponge holder. It is made by the firm of Kersten & Kaysan, of Brooklyn, N. Y.

ELIZA M. MOSHER, M.D.

181 Foralemon Street, Brooklyn.

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 MISCELLANEOUS.
 

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 THE CASE OF REV. DR. BOTHWELL.
 

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Rev. Dr. George W. Bothwell, of this city, while administering medicine to one of his children, accidentally swallowed the cork of the bottle which held the medicine. On the subsequent day he preached two sermons. Efforts were made to dislodge the cork by suspending the body, head downward, but without avail. Tracheotomy was performed by Dr. J. D. Rushmore, and several fruitless attempts made to remove the cork, which had lodged in the left bronchus, using in the operation a specially constructed instrument of the nature of a cork-screw. The patient died May 3d, two weeks and one day after the accident. At the autopsy the cork was found impacted in the left bronchus, at the point previously determined by the surgeons. The pathological conditions discovered at the autopsy were septic broncho-pneumonia, recent pleuritic adhesions, septicæmia and insufficiency of mitral valve.

## BROOKLYN VITAL STATISTICS FOR JANUARY, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population, estimated, - - - - -	853,945	The number of births reported was - - - - -	1398
In the month of January there were 1588 deaths, the rate of mortality being 21.78 per 1000 of population.		The number of marriages reported was - - - - -	533
		The number of still-births reported was - - - - -	143

The mortality by classes and by certain of the more important diseases was as follows :

*Causes :*

1. Zymotic, - - - - -	280	Malarial Diseases, - - - - -	5
2. Constitutional, - - - - -	272	Diarrhœal Diseases (all ages),	8
3. Local, - - - - -	857	"    "    (under 5 years),	2
4. Developmental, - - - - -	145	Phthisis, - - - - -	191
5. Violence, - - - - -	34	Bronchitis, - - - - -	98
Measles, - - - - -	18	Pneumonia, - - - - -	234
Croup, - - - - -	49	All Respiratory, - - - - -	359
Diphtheria, - - - - -	91	Bright's Diseases, - - - - -	40
Scarlet Fever, - - - - -	45	Puerperal Disease, - - - - -	17
Typhoid Fever, - - - - -	10	Old Age, - - - - -	29
Whooping-Cough, - - - - -	14	Suicide, - - - - -	7
Cerebro-Spinal Meningitis, - - - - -	10		

*Reported Cases :*

Diphtheria, - - - - -	200	Measles, - - - - -	351
Scarlet Fever, - - - - -	247	Typhoid Fever, - - - - -	45

Deaths by sex, color and social condition were as follows :

Male, - - - - -	806	Native, - - - - -	1098
Female, - - - - -	782	Foreign, - - - - -	490
White, - - - - -	1558	Married, - - - - -	415
Colored, - - - - -	30	Single, - - - - -	958
Widows, Widowers, and not stated, - - - - -	215		

Still-births, excluded from list of deaths, were as follows:

Males, - - - - -	73	} Total, - - - - -	143
Females, - - - - -	70		
Deaths in public institutions, - - - - -	126	Homicides, - - - - -	
Deaths in tenement houses, - - - - -	532	Suicides, - - - - -	7
Inquest cases, - - - - -			140

*Age Periods:*

Deaths under 1 year, - - - - -	324	Total deaths, 5 to 20, - - - - -	157
"    "    5 years, - - - - -	318	"    "    20 to 40, - - - - -	279
Total deaths under 5 years, - - - - -	642	"    "    40 to 60, - - - - -	265
		"    "    60 and upwards, - - - - -	245

Certain foreign and American cities show the following death-rate for the month of January:

Brooklyn, - - - - -	21.78	Vienna, - - - - -	21.98
New York, - - - - -	23.93	Paris, - - - - -	26.61
Philadelphia, - - - - -	20.04	London, - - - - -	26.50
Berlin, - - - - -	20.16	Glasgow, - - - - -	28.50
Dublin, - - - - -			32.36





ANDREW CÆSALPINUS.

The history of the discovery of the circulation of the blood would be incomplete without a sketch of the life and work of Andrew Cæsalpinus, the eminent botanist and physician, who was born near Florence, in 1519.

His countrymen bestow upon him the honors which we give to Harvey, and have erected a monument to him as the discoverer of the circulation of the blood in the University of Rome.

What Cæsalpinus did discover was very much the same as had been already discovered by Servetus, but without the knowledge of what he had done, as Servetus' book was so nearly obliterated by the religious bigotry of the time that very few could have known of what he had discovered or written on the subject.

Cæsalpinus was the first to use the term "circulation of the blood," but it seems to have been only the lesser circulation that he had an idea of.

He describes it as follows in his "Questionum Peripateticarum:—"

"The lungs drawing the warm blood through a vein like the arteries, out of the right ventricle of the heart, and returning it by an anastomosis to the venal artery which goes to the left ventricle of the heart, the cool air being in the meantime let in through the canals of the aspera arteria, which are extended along the venal artery, but do not communicate with it by inosculations, as Galen imagined, cools it only by touching."

"To this *circulation of the blood out of the right ventricle of the heart, through the lungs into its left ventricle, what appears upon dissection answers very well; for there are two vessels which end in the right ventricle and two in the left; but one only carries the blood in, the other sends it out, the membranes being contrived for that purpose.*"

His treatise *De Plantis* gives him a high rank among the early botanists, as in it he makes a "distribution of plants after a regular method formed on their natural similitude, as being the most safe and useful for helping the memory and describing their virtues."

He left an herbarium of 768 species which was very recently still in existence.

He was at one time professor of physic and botany in the University of Pisa, from which he was called to Rome to become the physician to Pope Clement VIII, where he died in 1603.

He was the author of several works on botanical and medical subjects.

Chapman divides the history of the circulation of the blood into six epoch-making periods.

1. The structure and functions of the valves of the heart.—Erasistratus, B. C. 304.
2. The arteries carry blood during life, not air.—Galen, A. D. 165.
3. The Pulmonary circulation.—Servetus, 1553.
4. The Systemic circulation.—Cæsalpinus, 1593.
5. The Pulmonary and Systemic circulations.—Harvey, 1628.
6. The Capillaries.—Malpighi, 1661.

To which should be added the epoch of the demonstration of the valves in the veins.—Fabricius, 1603.

THE  
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ORIGINAL ARTICLES.

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ANOTHER OPERATION FOR THE RADICAL CURE OF  
INGUINAL HERNIA.

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BY W. L. ESTES, M.D.,

Superintendent St. Luke's Hospital, South Bethlehem, Penn.; Lecturer on Hygiene, Lehigh University.

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In August, 1887, the writer, in the annual address which he delivered before the Lehigh Valley Medical Association, described what he thought was an improved method of operating for the radical cure of inguinal hernia. Three cases had been operated upon at that time. Since then five more cases have been treated after this method. As the operation has proved successful in every case so far, with *no return of the hernia in any case*, I have concluded, with a record of only eight cases, to publish the method and to ask for it careful trial by surgeons who may have more frequent opportunities to employ it.

Before 1887 I had had occasion to employ Wood's and Heaton's method in several cases, and always with improvement, but doubtful result as to the return of the hernia. McEwen's operation seemed to me to offer as the central idea the increase of artificial bulk to oppose the re-descent of the hernia, when the attempt

should be to close the openings through which the escape takes place as well. Nussbaum's simply offers the opposition of the peritoneum (shortening the sac) to the return of the hernia.

Weir's suggestion of leaving open the upper part of the wound and allowing it to heal by granulation after employing McEwen's method of dealing with the sac, was an improvement upon the original method. This was further improved by McBurney's recommendation of causing the whole outside wound to heal by granulation, by packing it with iodoform gauze, while the sides were held in moderate apposition by deep sutures. Banks' operation is practically the same as Nussbaum's. Ball's consists in twisting the freed sac, ligating it as high up as possible, and suturing the twisted sac in the canal. Little's operation is a slight modification of McBurney's. Halstead's operation seems to have for its main point the removal of the vas deferens and vessels from the inner to the outer angle of the wound. In suturing the skin, he recommends that only the lower part be penetrated by the stitches, so that they shall be buried when tightened. Stanmore Bishop proposes a modification of McEwen's operation, consisting in passing a suture into the freed sac in such a manner that when it is drawn up the sac shall be invaginated.

Analysis of all these operations will show that they belong to two categories: 1st. Those that operate mainly by obliterating the sac. 2d. Those that close the canal. It seems to me that the attempt should be to (1) obliterate the sac; (2) close the internal ring; (3) close the canal.

I have recently seen an account (*Med. Record*, Jan. 17, 1891, p. 84a) of an operation devised by Dr. Edoardo Bassini, of Padua, which in his hands seems to have given marked success in a large number of cases, and embodies the idea of the double intention of obliterating the sac and closing the canal. It consists of three steps essentially: 1st. The aponeurosis of the external oblique overlying the inguinal canal, and the pillars of the external ring are exposed. 2d. After all bleeding has been stopped, the aponeurosis is incised the whole course of the canal—from external to internal ring—and dissected out from the contiguous structures so as to form two flaps, which when folded back expose the underlying tissues. The spermatic cord is now drawn out and separated from the neck of the sac as far back as possible into the inguinal fossa. Then the sac itself is opened, adhesions, if any, are broken up, and omentum, if present and thickened, is usually ligated and excised. The hernia is reduced, the neck of the sac is twisted and ligated, and the portion below the ligature is cut off.

3d. The aponeurosis and adipose tissue are dissected away from the outer margin of the rectus above and below, as well as the triple layers formed by the internal oblique and transversalis muscles and Scarpa's fascia. The flap so formed is now drawn on and attached to the posterior border of Poupart's ligament by interrupted silk sutures, thus forming the posterior wall of the canal on which runs the spermatic cord. The divided portions of the external oblique are now united by interrupted sutures. This forms a new canal for the spermatic cord, and the abdominal wall is said to be able to resist any inclination to re-descent on the part of the hernia; the external wound is closed and antiseptic dressings applied.

Dr. Bassini publishes a tabular statement of his operations, showing 251 cases of non-strangulated hernia, of which 108 remained cured at periods of from one to four and a half years after the operation. Of 131 cases operated upon from a month to a year before the tables were compiled, there had been no relapse. This is certainly a remarkable showing.

Mr. E. Stanmore Bishop credits McEwen with 49 operations, of which only one wore a truss afterward, "and it was doubtful whether it was required."<sup>1</sup>

Dr. W. T. Bull, in the "Medical News," July 5, 1889, reports 134 cases, and divides them into four series:

1st series: Ligation and excision of sac, 40 cases, 8 relapses.

2d series: Ligation and excision of sac and suturing ring, 39 cases, 8 relapses.

3d series: Ligation and excision of sac, suturing ring and canal, 39 cases, 11 relapses.

4th series: Children—operation not mentioned—11 cases, 5 relapses.

Shortest period before relapse, one month; longest period before relapse, eighteen months.

Dr. Bull's operations include all of the three known methods, and the conclusions drawn were that the operations for radical cure of hernia are of doubtful utility, and that in cases of recurrence, the unfavorable result will occur usually inside of eighteen months.

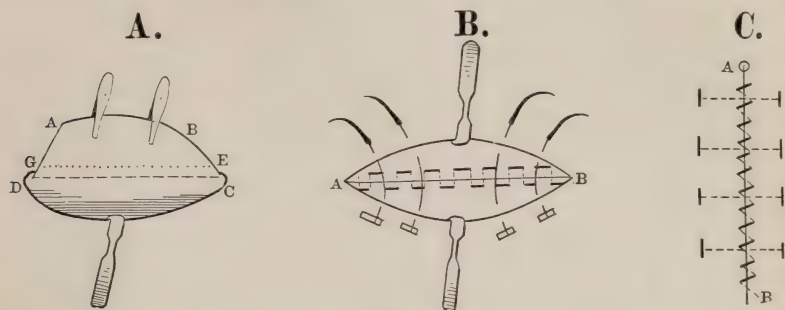
I am, therefore, all the more emboldened to publish my method, as of the eight cases, five have passed over the doubtful period, and none of them has relapsed. The endeavor in the operation I have adopted is *to close the internal ring, obliterate the sac, and close the inguinal canal.*

<sup>1</sup> Lancet, May 31, 1890.

In the first place, careful methods of asepsis are employed—namely, shaving the region about the hernia and the pubes; washings with soap and warm water, then with absolute alcohol, and then with 1-1000 sublimate solution; most careful disinfection of the hands of operator and assistants; sterilization of instruments and dressings by heat. The tissues are incised down to the sac, beginning over the internal ring and extending downward to the scrotum or labium (into these, if necessary, on account of adhesions), the sac is opened and the hernia reduced. If the hernia contains omentum, this is invariably ligated en masse and excised. The sac is now carefully dissected out up to and about half an inch within the internal ring, just as in McEwen's operation. The cord is disturbed as little as possible. It is desired that it (the cord) shall occupy the lowest part of the wound cavity. When the sac has been thoroughly freed, it is held up by a clamp forceps, flattened out laterally, and that part which may extend below the external ring is cut off: then its vertical (as held) width is made to correspond to the depth of the wound by excising longitudinally as wide a strip as may be necessary. The idea is to retain only enough of the sac to fill in the inguinal canal. Now a suture of stout silver wire is passed through all the tissues from without inward, beginning on the inner side, while the index finger is held in the ring to protect the hernia, which may descend, and also to direct the point of the needle so that the arched border of the transversalis muscle and fascia on the inner, and the fascia near Poupart's ligament on the outer side shall be traversed. This suture is immediately tightened, and should close up the internal ring so completely that the finger cannot be introduced into the abdominal cavity. The two sides of the cut-off sac are now placed together (being very careful that peritoneal surfaces are in apposition). They are held together by forceps and sutured together by a loose cobbler's stitch of catgut. Then beginning above at the inner ring, silver wire sutures are passed deeply through all the tissues forming the walls of the canal and fastened on either side, after drawing the sides firmly together by small cylindrical pieces of wood, five-eighths of an inch long and a little more than one-eighth of an inch thick, the wire being wrapped around the centre of these "quills." The sutures should be sufficiently close together that only a very small space intervenes between the ends of the quills as they lie parallel with the wound and about half an inch from the edge. These sutures also pass through the sewed-up sac. The result of this suturing is to draw the sides of the canal firmly together below, with the flattened sac



between, and raise the edges of the wound up in a ridge, so that the inner ring is closed, the canal filled up entirely, except the space occupied by the cord, and the sac entirely obliterated. The edges of the wound are now sutured by a continuous catgut suture. A

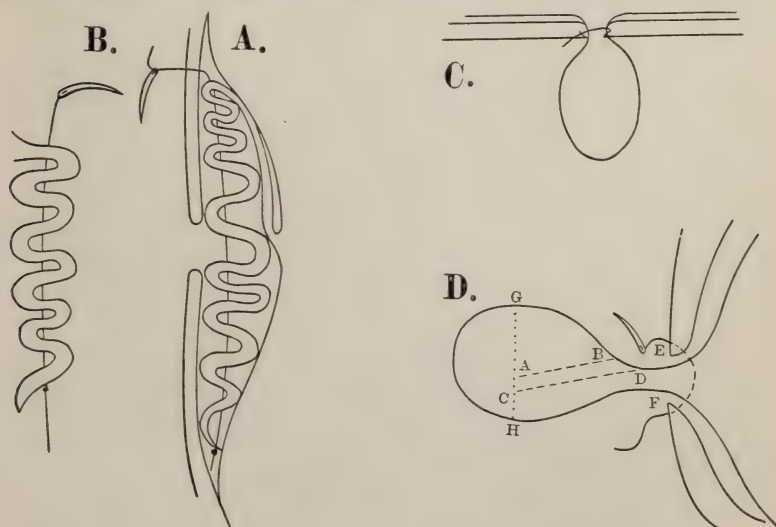


DIAGRAMS SHOWING THE PRINCIPAL STAGES OF THE OPERATION.

A—Represents the sac A B C D dissected out and held up by a pair of forceps, while the incision G E removes the upper three-fourths; D C the line of sutures to unite the sides of the sac.

B—Shows the wound after the sac has been cut off and its sides A B stitched together. The form of sutures for the sac is shown, and how the silver quill sutures are passed.

C—Shows the wound A B after it is closed, also the form of the quill sutures and manner of fastening the several sutures.



Diagrams showing comparison of writer's method of dealing with the sac with those of McEwen and Nussbaum. A and B, McEwen; C, Nussbaum; D, Estes. G H—line of vertical incision when sac is redundant. A B line of incision to remove upper three-fourths of sac. C D catgut sutures closing sac. F E first silver suture passed through muscles and neck of sac.

reference to the diagram will perhaps assist the description in making the operation clear.

As the several operations commonly practiced follow the general type of Nussbaum's and McEwen's, I indicate their method of dealing with the sac in comparison with mine. After I had practiced this operation for some time, in looking over the literature of the subject, I noticed that Riesel, in 1877, advocated splitting the canal its whole length, then remove a part of the walls, and then sew the shortened tissues firmly together, after ligating and cutting off the sac. My operation differs from Riesel's in that I use quill sutures to close up the canal instead of removing a strip of the tissues forming the sides. Riesel ligated, cut off and returned the sac to the abdominal cavity. I use it to help fill and solidify the canal.

The cases operated upon are, briefly, as follows :

CASE I.—William H., age 22, single, Pennsylvanian, locomotive fireman. Large omental hernia, irreducible and adherent. Omentum dissected from the sac, and after much difficulty returned to abdominal cavity (the difficulty experienced in returning the large mass of thickened omentum through the internal ring induced me in all the subsequent cases containing omentum to ligate—always *en masse*—and excise the omentum). Operated upon December 10, 1886. Discharged cured, December 24th, fourteen days after operation.

He was advised to wear a light truss for three months. He, however, neglected to wear any truss ; in six weeks went back to his work—*fring on a locomotive*—and has never experienced the least inconvenience from the hernia since. I have recently examined this case, and found the canal and ring firmly closed.

CASE II.—Morris H., age 29, single, Pennsylvanian, laborer. This was a case of old inguinal hernia, which had slipped under his truss while doing some heavy work, and had been strangulated for a number of hours. Prolonged taxis and puncture had been practiced before he was brought to the hospital. There was a very large protrusion of omentum and intestine through a widely dilated canal. The omentum was already necrosed, and the large knuckle of intestine was purple—almost past redemption. The omentum was ligated and removed with Pacquelin cautery, and the intestine, after much care and disinfection, returned to the abdominal cavity. Operated upon February 10, 1887. Discharged, cured, February 22d, twelve days after operation. I have not personally examined this man lately ; but he was urged to return upon any

manifestation of return of the hernia. As he lives very near and has not reported, I conclude the hernia is cured.

CASE III.—Thomas H., age 37, married, American, freight-car conductor. Irreducible, adherent omental hernia, large size, and ten years' standing. Operated upon February 22, 1887. Discharged, cured, March 10th, sixteen days after operation. I have examined this case quite recently, and notwithstanding his work requires jumping off and on moving freight trains, and much heavy lifting, there has been no indication of a return, and the canal and ring are closed firmly.

CASE IV.—Sidney M., age 49, married, carpenter, American. Incomplete omental inguinal hernia—adherent and irreducible. Operated upon March 20, 1889. Discharged, cured, April 3d, thirteen days after operation. No return.

CASE V.—John G., age 10, Irish, schoolboy. This was a curious case. An omental congenital hernia, complicated by suppurative orchitis on the same side. The testicle and omentum both removed. It was found that the suppuration in the testicle was produced by a corroded ordinary pin, which was imbedded in the gland. The father remembered that several months previous the child had had a sudden attack of pain, vomiting, etc., and that the doctor in attendance had "stuck something" in the swelling after he had tried in vain for some time to reduce it by taxis. When operated upon, the omentum was bathed in pus and adherent everywhere to the sac. Careful disinfection practiced. Operated upon June 5, 1889. Discharge, cured, June 21st, seventeen days after operation. I have recently examined him, and there is no sign of a return. Canal and ring firmly closed.

CASE VI.—Mary J., age 40, Welsh, widow. This was a rare case of *dissecting omental hernia*. A large protrusion of omentum had taken place about ten years before admission, had forced itself out of the canal, and had made its way upward and outward, and when operated upon was actually adherent to the ilium at the ant. sup. spine. A recent additional protrusion of omentum had taken place, and was strangulated for several hours when I saw her. About a pound of hardened and fatty omentum was removed. Operated upon March 31, 1890. Discharged, cured, April 26th, twenty-seven days after operation. This was a very difficult operation, as the ring was enormously distended and the canal had been ruptured. No return.

CASE VII.—Charles K., age 32, single, American, locomotive engineer. Strangulated omental hernia (patient had had reducible hernia for years), complicated with an undescended testicle which

rested in the lower part of the canal. Testicle was inflamed and atrophied. It was removed, as well as the omentum. Operation June 12, 1890. Discharged, cured, July 3d, twenty-one days after operation. I have recently examined this man. He has no symptom of a return, and his canal and ring are firmly closed.

CASE VIII.—Martha M., age 50, Irish, married. Small irreducible adherent omental hernia, which also contained the vermiform appendix, which was likewise adherent to the sac. The omentum and appendix both removed. Operation March 21, 1891. Discharged, cured April 2d, twelve days after operation.

Of these cases, 3 were operated upon four years ago, 2 two years, 1 thirteen months, and 1 ten months ago, and the last only last month. Except the last case, every patient has been actively employed since the operation, and in the cases of the men, their occupations have been of the most trying character. I advise always that a light truss be worn for three months after the operation, but I believe in every single case this advice has been disregarded, and in every case the patient has returned to work within two months—in most of the cases much earlier—and yet no evil has resulted. *Twenty-seven days* was the longest period any case remained in the hospital after operation. The average time in bed after the operation is about ten days. The patients are kept in bed until the union of the wound is firm and complete. The superficial sutures are removed about the fifth day, the deep sutures on the seventh or eighth day. The deep suture closing the internal ring is usually the last one removed.

No suppuration has taken place in my cases, and union has always been per primam. It seems to me this latter point is of itself a further recommendation of the method. If the method puts the tissues in such condition of apposition and juxtaposition that they will unite promptly and *firmly* and thus gain the immense advantage of primary union over the tedious granulation method, it saves much time of disability for the patient, besides assuring, by the primary union, a stronger protection against the return of the hernia than would be afforded by granulation tissue. Assuming that the walls of the canal and ring are placed in such condition of apposition that primary union may take place firmly the whole depth of the wound, I think every surgeon will agree with me that this affords a stronger bar to a re-descent of the hernia than a mass of cicatricial tissue would. Any one who has watched a large cicatrix yield under continuous pressure, I am sure, will appreciate this point.

It would be presumptuous indeed to claim for this method infallibility, and I do not for a moment believe that it will prove so. I feel that seven cases on which it has been employed and had thorough and trying tests through the employment of the patients operated upon, are not sufficient to properly establish the usefulness of the operation. All I claim for it is that it is "*another method*," and one employed so far only by myself as far as I know, and I desire to introduce it to the profession and bespeak for it some trial, but earnestly hope that further experience by others as well as myself shall demonstrate its usefulness beyond a reasonable doubt.



## REPORT OF A CASE OF RECURRENT APPENDICITIS, DUE TO CONCRETIONS—OPERATION—RECOVERY.

BY H. W. RAND, M.D.,

Surgeon to Long Island College and St. John's Hospitals.

Read before the Brooklyn Surgical Society, March 6, 1891.

The patient was a female, aged 26 years. On January 25th she was seized with a chill, which was accompanied by severe pain over the entire abdomen, but most marked at the umbilicus. Fever and diarrhœa followed the chill. The pain and diarrhœa continued through the night, although she took several doses of a cholera mixture containing opium.

*Jan. 26th.*—I saw her for the first time. There was marked tenderness over the whole abdomen, but it was not apparently greater over the appendix than elsewhere. Moderate distention and some nausea. Temperature 102.5°, pulse 100. At 3 p.m. and at 2 on the following morning she had chills, followed by an increase of fever. Several attacks of vomiting occurred during the night, possibly due to an opiate.

*Jan. 27th.*—Temperature 98.5°, pulse 72. Pain still most marked around the umbilicus, and, while constant, was attended with exacerbations. She now thought that tenderness to finger pressure was most pronounced at McBurney's point, but of this she could not be certain, as the same degree of pressure over any part of the abdomen caused pain.

*Jan. 28th.*—Temperature 99°, pulse 72; vomiting and increased tympanites. Chilly sensations at times during the day.

*Jan. 29th.*—Temperature and pulse normal. The bowels were moved, for the first time in three days, by a small dose of rubinat water and an enema. The fæces were white. Tenderness was now decidedly most marked at McBurney's point.

*Jan. 31st.*—Much less pain and tenderness. Fæces still white.

*Feb. 2d.*—Patient was better in every way, and from this date until February 16th improvement was continuous. For ten days prior to the 16th she took no opiate. The bowels moved easily with the aid of an enema and an occasional dose of rubinat water, and the fæces gradually assumed a normal color. Tympanites disappeared, but there yet remained some tenderness over the appendix.

*Feb. 16th.*—Late in the afternoon she had a chill, followed by fever and accompanied with pain around the umbilicus, extending to the right iliac region.

*Feb. 17th.*—Temperature and pulse normal. The pain around the umbilicus was marked and throbbing in character. Finger pressure detected a very sensitive area, about an inch in length, along the outer border of the right rectus, the upper end of which was on a line drawn from the anterior superior spinous process to the umbilicus.

*Feb. 18th.*—Condition improved. Less pain and tenderness, but was at no time entirely free from pain.

*Feb. 20th.*—While pain was less marked, and the patient was now taking no anodyne, there was increased tenderness along the line above mentioned. Temperature and pulse normal.

*Feb. 21st.*—Dr. A. J. C. Skene saw the case in consultation. The patient's condition was about the same as on the previous day, except that there was more distention of the abdomen. It was deemed best to wait for another day before deciding upon operative interference. Pain and tenderness increasing during the afternoon, I made preparations for laparotomy on the following morning.

*Feb. 22d.*—Present, Drs. Skene, W. H. Skene, Pearce, H. Wallace and Bowser. Lateral operation. No evidences of peritonitis. The appendix was easily found. There were no adhesions, but it was much thickened, its superficial vessels dilated and its contents firm and resistant to pressure.

I transfixed the mesentery at its junction with the appendix, and tied both with silk. When the organ was removed, its stump was disinfected and the end closed with a catgut suture. The abdominal wound was closed throughout, no drainage being employed. The appendix contained two concretions, the largest five-eighths

of an inch long and about one-eighth in diameter. The larger concretion occupied the base of the appendix and filled its lumen completely. Its removal from the appendix was followed by the escape of considerable thick brownish pus having a faint faecal odor.

The highest temperature after operation was 100.1°. By the third day it was normal, and there it remained. Considerable pain was complained of for the first three days. Primary union was obtained throughout the wound, and up to the present time recovery has been uninterrupted.

In reviewing this case there are several points of interest. In the first place there was a history of a similar mild attack three years previously, and of a more severe one the following year. This second attack was attended with such frequent chills that it was called a remittent fever by the attending physician and treated as such. There was, however, a history so nearly like the one above given that the patient herself believes them to have been identical in character. The chills were irregular, the pain severe, and most marked around the umbilicus and in the right iliac region, and it was felt at intervals for several weeks after apparent convalescence.

The symptoms at the onset of the third and last attack were those of an enteritis, and it was not until the fourth day that there was any reasonable certainty as to the existence of trouble in the appendix. The temperature and pulse were, however, normal, and the patient was making such constant and uninterrupted improvement that an expectant treatment seemed to be the only one indicated at this time.

The absence of bile from the faeces for a period of five days was a noticeable feature. There was no jaundice nor was there at any time bile in the urine. There seemed to be simply a suspension of the secretion of bile. This was probably the result of the initial enteritis rather than of the accompanying appendicitis. The frequent chills were apparently due to distention of the appendix with its more or less purulent contents, a period of relief following spontaneous evacuation into the intestine.

The absence of fever during the few days prior to operation did not entirely reassure me as to the patient's safety; and although the conditions found at the operation were such as to show that she was in no immediate danger, the appendix having become much thickened and thus less liable to perforation, yet the presence of the concretions and the more or less continued suppuration they excited within the appendix were a constant menace to life.

The seat of the greatest and most persistent pain was not immediately over or in the appendix, but at the umbilicus. Even the throbbing pain which was present at times, and which in the light subsequently thrown upon the case must have been due to overdistention of the appendix, was also felt at the umbilicus. The location of pain at this point in appendicitis has been noted by others, but I am not aware that any satisfactory explanation has been advanced to account for it other than the probability that it is reflex in character.

As to the proper material for ligation of the appendix, there appears to be a difference of opinion. The majority of surgeons use catgut. Some use silk or catgut, as fancy dictates. I have seen no reported accident from the use of the latter, and while it may be reasonably safe where drainage is employed, there seem to be good reasons why silk should always be preferred when the abdominal wound can be safely closed without providing for drainage. This is especially so if the free end of the stump is not sutured. Permanent closure, where an absorbable ligature is used, must be brought about entirely by changes around and not within the stump of the appendix. We cannot expect obliteration of its lumen by adhesion of the opposed mucous surfaces. When its peritoneal covering or its divided coats are brought in contact by sutures, catgut may be a safe ligature for temporary constriction of the stump; otherwise it would be hazardous to close the abdominal wound and trust to an absorbable ligature alone.

NOTE.—*March 16th.*—This patient is now entirely well, and free from pain and tenderness.



## PYOSALPINX.

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BY W. J. CORCORAN, M.D.

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Read before the Brooklyn Gynæcological Society, February 6, 1891.

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Not very long ago every collection of pus in the pelvis was due to pelvic cellulitis. Tubes and ovaries were simply included in the general inflammatory exudate without causative or differential relation thereto. But a very short time since, every case of pelvic cellulitis was but the consequence of an infecting tubal inflamma-



tion, and salpingitis was the watchword, extirpation the method of attack. Under the comparative immunity furnished by the brilliant advance in abdominal surgery, the tube that could be outlined by the examining finger and unable to free itself from the taint of suspicion was doomed at once. The surgeon who could not show his array of abstracted uterine appendages, backed up by its table of statistics, was at once acquitted of any aspiration to higher gynæcology. Now it seems to me the pendulum has swung back somewhat. Tubes with even strong evidence of guilt against them are allowed a longer term of probation. Some of the older and partially-forgotten methods of treatment are revived and newer ones tried before the extirpating knife is employed. It is with a view of bringing this subject before the society for discussion that I present the following cases :

Miss R., age 23, single, saleswoman, was admitted to St. Mary's Hospital on September 27th, suffering from extensive periuterine inflammation. She had been attacked shortly after the regular menstrual period by severe pelvic pain, accompanied by high temperature. Further than this the patient's story of her illness is entirely valueless. Her many contradictory statements and the absence of any ostensible cause for her attack suggested the possibility of abortion or an attempt at inducing abortion. This was, however, strenuously denied, although sexual relations were afterward admitted. Her history was negative as regards gonorrhœa. Family history negative. Her general condition was good. All organs normal. She complained of great pain in pelvis, was exceedingly nervous from mental worry and loss of sleep. Pulse 110, temperature  $103^{\circ}$ . Slight tympanitic distention of abdomen, with marked tenderness over lower portion. Digital examination found the uterus firmly fixed by extensive exudation. The whole pelvic floor firm and very sensitive.

The treatment ordered was the frequent use of the hot water douche, poultices, anodyne suppositories, afterward replaced by iodoform and common suppositories night and morning, and a general supportive regimen. Improvement was prompt and decided. The acute symptoms quickly subsided, and the periuterine infiltration became gradually less, until by the end of October the uterus could be outlined normal in position and depth, and now somewhat movable. The patient's temperature all this time, *i.e.*, after the first few days, was steadily  $99\frac{1}{2}^{\circ}$  in the evening. About the middle of November she complained of rheumatic pains in different joints, principally in right elbow and knee, with slight increase in evening temperature. All treatment short of opiates

failed to relieve these pains until galvanism was tried, which gave some ease. About the 1st of December she began to suffer from pain in right iliac region, somewhat intermittent in character, but otherwise constant and very severe. Her temperature now ranged in an irregular curve from  $99^{\circ}$  to  $102^{\circ}$ .

Digital examination disclosed an elongated elastic tumor on the right of the uterus and somewhat posterior. The diagnosis of pyosalpinx was made, and the possibility of operation suggested to the patient was met by flat refusal.

During the following week the tumor and pain gradually increased, until immediate operation was necessary to anticipate rupture of the tube; but the patient still declined to submit. Before her consent was finally obtained—but a few days—the tumor increased so very rapidly that it could be plainly felt through the abdominal wall, showing that it was more than pyosalpinx, as rupture of the tube would have occurred long before such dimensions were reached.

On December 13th Dr. Byrne opened the abdomen by the usual incision, and on division of the peritonæum, a smooth fluctuating tumor was laid bare, which on examination was found to be sub-peritoneal and distinct from the tube. It was emptied by trocar and canula, the point selected for puncture being first isolated by packing the wound with gauze. At least half a pint of pus was removed, the cavity was well irrigated, sutured to the abdominal incision and packed with gauze. The interesting point is that the tube was found to be altogether outside the abscess cavity and normal in every respect. Unfortunately, proper drainage was not maintained, and a reaccumulation of pus rendered it necessary to reopen the cavity, when a counter opening was made into the vagina and through and through drainage established. The patient's recovery has since been uneventful and rapid, though there is still a fistulous tract.

Another case occurring at the hospital at the same time may be briefly mentioned.

The patient seen at the dispensary presented marked septicæmic symptoms following a neglected incomplete miscarriage eight days before. Hæmorrhage, chill and fever had followed in rapid succession, with a very fetid discharge from the uterus. She was advised to enter the hospital then and there, but instead went home, and it was three days later when I was informed that she had entered the hospital.

When I saw her—intending to clear out the uterus—I found, much to my surprise, that all symptoms had subsided and all

placental remains had been expelled. The uterine cavity was well irrigated and patient ordered to remain in bed, with simple tonic treatment and small doses of ergot. All went well for about ten days, and patient was begging to be allowed to go home, when sudden chill and high temperature announced a new development. She complained of considerable pain in the right side. An examination revealed a distended Fallopian tube. The pain and fever, ranging in a very irregular manner from  $100^{\circ}$  to  $103^{\circ}$ , continued for several days, and with the physical evidence and previous history, made the diagnosis of pyosalpinx.

The house surgeon was told to have the patient ready for operation at any time, and in the meantime the treatment was poultices, slightly irritant, and tampons saturated with a solution of iodide of potash in glycerin, preceded and followed by the hot douche. Under this treatment the tumor sensibly diminished, symptoms abated, and in less than a month patient was practically well. She was kept in the hospital under observation for about three months assisting in the work of the ward, and then departed perfectly well, as far as she knew or examination could determine.

Here, then, are two cases that presented all the evidences, clinical and physical, of pyosalpinx, calling for immediate operation. The probabilities are that had the immediate operation been done, the patients would now, if well, be minus their tubes and sterile. By the postponement of the operation, by unavoidable delay in one case and conservative delay in the other, they are now well and have at least the possibility of maternity. It may be said that both were cases of mistaken diagnosis and prove nothing else. Even so. One was *not* a pyosalpinx and the other may have been a simple catarrhal salpingitis; but with the accompanying histories, many laparotomists would have discovered the mistaken diagnosis from the tubes when they were "specimens" and no longer serving any useful purpose, to the patient at least.

I am not prepared to say that in another case presenting the same symptoms and the same evidence of danger I should not urge immediate operation; but I do think it teaches caution in the performance of the operation, and that the surgeon who has opened the abdomen to remove the uterine appendages should find justification in the pelvis before he does so mutilate his patient, and that the condition there present should be his guide more than his previously-formed opinions were, though based on strongly corroborative history and physical evidence. Moreover, while every case of pelvic abscess is not due to a pus tube, neither does every case of pyosalpinx call for its obliteration. I can distinctly

recall in my earlier gynæcological experience cases of so-called recurrent pelvic cellulitis finally ending in abscess rupturing through rectum or vagina that ended in complete recovery and were followed by pregnancy. Looking back on them now in the light of a later experience, I can recognize that there must have been present—at least in some of them—purulent tubes, occasionally discharging their contents, and, as it was said, lighting up anew the old cellulitis.

Many cases are on record of *undoubted* pyosalpinx, as proved by the expression of pus from the tube through the uterus into the vagina where extirpation was not practiced either through the conservatism of the surgeon or the refusal of the patient to submit, which went on under other treatment to more or less complete recovery, and have in some cases been followed by pregnancy. It is easier to amputate than save an injured limb, and so with the diseased tube; yet many cases remain in which we have no other resource, and we must be content as yet to tarnish the lustre of our surgery in that we cure by amputation. But it seems to me a cause for gratification that, with the exception of a few enthusiastic laparotomists, the knife is not so readily employed as it was, and that we are making stronger efforts to remove the disease by other means than the removal of the parts diseased. Even this is not always effected, as it has been my lot to see a few women who figured in statistical tables in the column of recoveries as against the deaths, and who, though surgically cured, obstinately refused to so regard themselves, and some even claimed to be worse.

#### DISCUSSION.

Dr. SKENE.—The paper is one of special interest, from the fact that it deals with a subject which gynæcologists are not all agreed upon.

The rule has been laid down very positively by some of our surgeons, that when the ovaries and tubes are diseased they should be removed. Some of us feel that this is too indefinite for general acceptance. When there is a reasonable certainty that there is a pyosalpinx, the tube should be removed; that we all agree upon. But in cases of doubt it is safer and wiser to wait and watch the case and see if time and general treatment will bring relief. It appears to me that this is the point about which there is a want of harmony among us.

On one side we find those who insist that if there is a suspicion of disease of the tubes or ovaries, the abdomen should at once be

opened and the diseased parts removed, if any such are found. On the other side there are many who (while just as competent diagnosticians) favor waiting and trying less heroic treatment, or until the evidence shows plainly that surgical treatment alone is capable of giving relief. For convenience we might denominate the two classes radicals and conservatives. Now, it appears that both parties are liable to be more positive than the present state of our knowledge would warrant. One is prompted to make this statement upon hearing a radical say that he has operated one or two hundred times, and in all cases found that there was disease of the tubes and ovaries that warranted their removal; while a conservative states that in fifty or a hundred operations he found several cases that would doubtless have been better without any operative interference.

In thus contrasting the experience of the two parties, it should be understood that the one party is as skilled in operating and in diagnosis as the other.

This difference of experience and opinion which exists shows clearly that both sides may be to some extent in error, and it shows still more clearly that we are much in need of more facts to guide us to definite conclusions.

The paper just read I consider of great value in supplying facts regarding the natural history of salpingitis. Such facts afford the only ground upon which the conservatives can justify their treatment of those cases. At least it gives us courage to wait in certain cases to see if recovery will not come without operating.

I may add to the paper some facts observed in my own practice. In the first place, I have recorded in my work at least one case of hydrosalpinx that recovered and has remained well for years, and I have seen others that recovered.

A very interesting case was seen in hospital a few days ago. The history, in brief, is as follows: the patient was brought to hospital suffering acutely from pelvic pain and metrorrhagia. She was tamponed either by the ambulance surgeon who brought her in or else by the house surgeon.

At my first examination I found an ovum presenting at the os externum. This was easily removed. She did not get complete relief. There were symptoms of pelvic inflammation, which did not yield to ordinary treatment. A careful examination was made by Drs. Palmer, Raymond, McNaughton and myself. We all found a distended tube and an enlarged and tender ovary. The other tube was enlarged apparently, but not distended.

This condition of the one tube, taken in connection with her constitutional disturbance, satisfied us all that there was a pyosalpinx, and we all felt that removal of the tube and ovary would be necessary. As she was not in immediate danger, we concluded to continue treatment, in the hope that her general condition would improve and that she could better stand the operation. She did improve very much, and, at the end of a month or six weeks she was etherized for examination and operation if necessary.

Then we all found that the enlargement of the tube and ovary had completely disappeared. At our first consultation and examination we were all very confident of the diagnosis, and subsequently we were equally confident of the recovery. Of course, there is no certainty that this was a case of pyosalpinx, but the evidence was strongly presumptive, and I may add that we all doubted the possibility of recovery without operative treatment.

I recall another case, that was seen by two of the ablest gynæcologists in this country, who found diseased ovaries and tubes; the tubes both appeared to contain fluid. I shared their opinions, and operated. Both ovaries were diseased, but the tubes were perfectly normal. Several greatly enlarged veins gave the signs of distended tubes.

The patient recovered from her operation, but I feel that she would have been as well off to-day if she had not been operated upon.

There is perhaps no question more difficult to settle than the treatment of salpingitis. When to rely on general treatment and when to remove the tubes requires clear judgment based upon large experience, and such contributions as the paper of this evening are the kind that is most needed at the present time.

Dr. McNAUGHTON.—In answer to Dr. Jewett's question as to the moral effect of these operations: It seems to me that when a laparotomy is done, and the finger introduced into the cavity, there must be a certain number of adhesions broken up, which will of course tend to lessen the pain. I believe this to be the explanation of the cases that have been so much relieved by a simple exploratory laparotomy.

We had an instructive case at the hospital a short time since. The patient had been an inmate of the hospital a long time, and had been examined repeatedly by several of the visiting and house staff. There seemed to be no question but it was a case for abdominal section. She was placed on the table to take the anæsthetic, when it occurred to me that another examination would not be out of place before the arrival of the operating surgeon. I found

everything changed since the previous examination ; in fact, there was nothing found of sufficient gravity to warrant the operation. The ether was withheld until after the arrival of Dr. Skene, when it was decided not to operate.

Dr. BYRNE.—It would seem, from the statements of some gentlemen nowadays, that the diagnosis of pyosalpinx was quite an easy matter. I think, as Dr. McNaughton says, it is an extremely difficult matter. I have rarely seen cases myself where I could say with any degree of certainty that such was the case, though bimanual examination would lead one to suppose such ; still, there were oftentimes reasons why I could not be certain. It may be diagnosed as pyosalpinx, as in a case recently observed, when it is really a hydrosalpinx. Again, you may have pyosalpinx without much fever, and you may have hydrosalpinx with more or less fever accompanying it. It is always in order in most cases to use the exploratory needle beforehand, but in the case related by Dr. Corcoran there was no point in the vagina where pus could have been reached or recognized with reasonable certainty, and yet that tube was involved secondarily ; so even the exploratory needle cannot always be made to aid us in diagnosis as to the exact seat of the pus formation. It is difficult to understand how we got along with these cases of pelvic inflammation and abscess many years ago, and yet, looking back thirty or forty years, I can recall a great many where complete recovery has followed, either by natural curative processes or surgical interference other than the extirpation of tubes and ovaries, and with complete restoration to health. I do not think that in the next decade there will be so many cases of removal of patients' tubes and ovaries as in the past.

Dr. McNAUGHTON.—I would like to ask if there is not some danger of pus entering the peritoneal cavity and exciting a septic peritonitis when an exploratory needle is used.

Dr. BYRNE.—I should say not ; that the abscess would be subperitoneal, and that therefore the cavity would be free. You might have pus in the cellular tissue between the vaginal mucous membrane and the pus sac proper, but I do not think there is any danger of carrying pus into the cavity of the peritonæum.

Dr. RAYMOND.—Would you make your puncture through the vagina?

Dr. CORCORAN.—Yes.

Dr. RAYMOND.—Would you in that case have detected the pus?

Dr. CORCORAN.—I think I would, though it was pretty high up.

Dr. RAYMOND.—What was the origin of the pus in that case?

Dr. CORCORAN.—The pus cavity was close up to Poupart's ligament and was continuous with the pelvic roof, and behind and at the posterior inferior border of the tumor could be felt the ovarian tube. You could not remove the pus cavity in this case; it would not have been practical, because the dissection would have been fearful.

Dr. RAYMOND.—Was it a cellulitis?

Dr. CORCORAN.—Yes.

Dr. JEWETT.—Is it not possible to be mistaken as to the origin of the pus sac? There is no certainty that it might not be a suppurating cyst of the ovary. In that case the needle must puncture two thicknesses of peritonæum, and thus might lead to leakage into the peritoneal cavity.

Dr. BYRNE.—It seems to me that familiarity with the early history and progress of a given case would tend to throw much light on that very point. If, in the early history, such as in this case related to-night, the indications were mainly those of inflammatory infiltration of the cellular tissue, with fixation of the uterus as if in plaster-of-Paris, and supposing the suppurative process to have started up in the progress of this inflammation, and for a long time in the early history of the case no inguinal or supra-pubic swelling could be noticed—these clinical features would, in my opinion, render it almost certain that though the suppurating mass could finally be felt plainly through the abdominal walls, yet that its origin must have been in the sub-peritoneal connective tissue, and not a suppurating cyst of the ovary; in other words, in the case of suppurating cyst of the ovary the history would be entirely different from that of the so-called inflammation and infiltration in the meshes of connective tissue in the pelvis, so that the early history would tend very much to enable one to arrive at a reasonably correct diagnosis.

Dr. JEWETT.—Do we not frequently have pus accumulations from the matting together of the structures in the lower portion of the pelvic cavity?

Dr. BYRNE.—Yes; yet in these cases the early history would also go far toward clearing up the doubt.

Dr. JEWETT.—Do you think the history should enable us to determine between pelvic peritonitis and cellulitis?

Dr. BYRNE.—I think so; I think the swelling in the early stage would be decidedly lower down, and there ought to be very little difficulty in differentiating.

Dr. RAYMOND.—At the recent meeting of the State Society in Albany the writer of a paper stated, in the discussion on the rarity



of pelvic cellulitis, that he had opened the abdomen in twenty cases in which cellulitis had been diagnosed by digital examination prior to the section, and in no single instance was cellulitis found. Such a broad statement surprised me very much.

Dr. BYRNE.—A statement of that kind would require some qualifying explanation to make me believe it. I think it is possible for men to be swayed in their judgment by a few coincidences in practice.

Dr. JEWETT.—Is it not probable that in former methods of treating cases of abscess in the pelvis we frequently opened pus tubes from the vagina under the impression that we were treating the result of a cellulitis?

Dr. BYRNE.—Yes, many, no doubt.

Dr. RAYMOND.—From an article published recently by a Philadelphia surgeon, on the prevalence of pyosalpinx in Philadelphia, one would think that pus was to be found everywhere.

I would like to ask Dr. Byrne if he recalls deaths in any number which occurred suddenly, which he now attributes to ruptured pus tubes.

Dr. BYRNE.—I cannot recall one single instance. The State of Pennsylvania, and the City of Philadelphia particularly, must be in a pretty bad way, according to Dr. Joseph Price and others.

Dr. JEWETT.—I recall a case in which a pus sac was discovered post-partum some weeks after partial subsidence of grave puerperal fever. I examined the case preparatory to opening the abdomen for the purpose of evacuating the abscess, when suddenly the tumor disappeared. The patient died of peritonitis some days after, and the post-mortem revealed a ruptured pyosalpinx. If the patient had been immediately subjected to a laparotomy and the cavity washed out, she might have been saved; but that procedure was not fully established at that time.

Dr. BYRNE.—I have seen a great many cases of so-called pelvic abscesses in my time where they discharged from the rectum, vagina, bladder, every place almost but the mouth, and the patients got better.

Dr. McNAUGHTON.—In a great many of these cases there has been a previous pelvic inflammation, so it is almost impossible to make out anything by examination.

Dr. BYRNE.—Yes, very true, and we know that where inflammation has once existed, it takes very little to light it up again; but I think Dr. Jewett will recall a case which I related to the Obstetrical Society in New York, of the wife of a physician in this city who was one of those unfortunate victims of pelvic abscess where

a celebrated gynæcologist insisted upon the necessity for opening the abdominal cavity, but did not do so, as she failed to return for operation. It broke through her rectum, and yet her uterus is as movable to-day, and her general health as good, as if she had never had anything of the kind.

The knowledge of this case, I think, will be useful in making us a little conservative. We all readily admit the often urgent and but too frequent necessity for laparotomy, and that abdominal surgery has done wonders; at the same time I think laparotomy may be, and doubtless often is, abused, and women unsexed without warrant.



### PERITYPHLITIS.

BY M. FIGUEIRA, M.D.,

Visiting Physician to St. Catherine's Hospital.

The difference of opinion among surgeons of prominence in regard to perityphlitis is quite marked. While some would have us believe the disease very dangerous and often fatal, others of equal prominence believe perityphlitis a disease of moderate severity, in which a fatal termination or severe complication is quite the exception.

The study of cases of relapsing perityphlitis that have been operated on, and the examination of the specimens so obtained, seem to me of considerable interest in this connection. We have in this class of cases well-marked attacks of perityphlitis, with all the characteristic symptoms, running the regular course of the disease and recovering apparently, but recurring at longer or shorter intervals.

The specimens obtained by operation from these cases show contraction of the lumen of the appendix, or obstruction with mucus or foreign bodies, or ulceration. In several cases the appendix was distended with fluid and the entrance from the gut closed by mucus. It is easy to understand how in such cases the cause of the trouble is relieved temporarily, but, the pathological conditions remaining, the trouble is renewed sooner or later.

But let us suppose—and the supposition is a reasonable one—let us suppose that nature was able to cure this pathological condition after the attack had subsided, then the patient would have entirely recovered, the illness in time would have been forgotten

both by himself and his physician, and if by chance, years after, such a case would come on the autopsy table, it would be recorded as one of appendicitis without symptoms. In this connection the cases reported by Toft are of great interest. He reports lesions of the appendix in every third case in three hundred autopsies. Kraussold claims a still larger percentage. Ransohoff thinks the percentage too large for this country, and gives  $13\frac{1}{3}$  per cent. as the percentage in sixty cases examined by him.

Now if only one-third of this percentage presented marked symptoms of disease during life, we have four out of every one hundred people the subjects of typhlitis that recovered, as all these cases died from other causes.

If, now, from these pathological considerations we turn to clinical evidence, we will find abundant proof that cases of typhlitis of moderate severity going on to recovery without grave complications, are quite frequent.

Pepper (*Medical News*, Jan. 7, 1888, page 22) says: "I have the records of scores of cases, the vast majority of which ended in resolution."

Treves (*British Medical Journal*, November 9, 1889) says: "This is the commoner form of typhlitis. . . . With this must be classed a large number of cases in which the symptoms are not severe and end in recovery."

Dr. Hare (*Ibid.*) says: "He had met with a good many cases of typhlitis, but none had required surgical interference."

All systematic writers on the subject recognize a mild form of perityphlitis. Thus Bossard divides the disease into a mild, a moderate and a severe form. With, from an anatomical point of view, makes a similar division into mild and severe forms. The stages of inflammation of Albers' and Cless' symptomatic classification, all recognize the same fact.

From all the above evidence one is forced to the conclusion, that there is a not severe form of perityphlitis quite commonly met with in practice, generally going on to recovery without grave complication, and the frequency of which cannot be gathered from large hospital statistics or the autopsy table. This class of cases forms the large percentage of cases met with in general practice.

Besides the above class of cases we have the severer forms of perityphlitis, and although much less numerous, the frequency of severe complications and the high rate of mortality make them of paramount importance.

The appendix is subject, either from the presence of foreign bodies—60 cases in 250 (Fibz)—or from mere inflammatory action,

to ulceration, often leading to perforation. There are two ways in which perforation takes place: either the ulcerative process takes place slow enough for localized peritonitis to take place with adhesions of the appendix to other organs, thus circumscribing from the general peritoneal cavity the space into which perforation takes place and the perityphlitic abscess forms; or the ulceration is so rapid that no barrier is formed, and perforation takes place into the general peritoneal cavity with resultant septic peritonitis.

When in the former class of cases an abscess forms, absorption is out of the question, and the pus finds its way in one of different directions. Either it makes its way to the surface—in 28 out of 67 cases—or opens into some of the internal organs; or, most dangerous of all, discharges itself into the general peritoneal cavity. And although the percentage of cases opening into the peritonæum is small—8 in 67—yet when once an abscess has formed from perforation of the appendix, one can never be sure that it will not lead to this more dangerous complication. Hence, when once the presence of an abscess is made out, the indication is plain: to cut down and give the pus an exit outward, and so be sure it is not burrowing in any dangerous direction. All, then, in the treatment and prognosis of these cases depends on this:—are we able from clinical evidence to determine, in a given case of perityphlitis, whether it is a mild case likely to end in recovery, or a severe case in which perforation and abscess have taken place, or is likely to; or is it a case of septic peritonitis, from general infection, caused by perforation? A study of the prominent symptoms in the different varieties of cases of perityphlitis will, I think, give one indications and signs by which to be guided to a great extent in determining the nature and condition of a given case.

In the mild forms of perityphlitis the fever is moderate, the pain is more localized and does not radiate in the course of the nerves; the pulse is good, the tumor is marked and appears early—sometimes from the first—and examination by the rectum does not detect infiltration or hardness.

In the severe variety of perityphlitis, where abscess and perforation so often occur, the fever is high, the pulse quick, vomiting more severe; the pain and tenderness are very acute, and radiate in the course of the nerves; the tumor is absent, or only forms later; and examination by the rectum is either negative or shows infiltration of pelvic floor on the right. The importance of this symptom is very great.

Pepper says: "In proportion as the tumor is marked delay is safe, especially if rectal examination does not detect induration of the roof at the pelvis."

Treves (*British Medical Journal*, Nov. 9, 1889), in speaking of the mild forms of perityphlitis: "The tumor appears earlier; it cannot be as readily made by the rectum."

If we consider the position of the appendix, curled up behind the cæcum or extending below and close to it, and the nature of the pathological changes that take place in these two classes of cases, one can easily see the importance of this symptom. In the milder cases we have a distended appendix or inflamed cæcum (Ransohoff, *Journal American Medical Association*, July 14, 1888), but no perforation or marked infiltration; the tumor pushes against the abdominal wall and is easily felt from the outside, but not by the rectum.

On the other hand, when localized peritonitis, adhesions, perforation and abscess take place, the parts are bound to the fascia over the psoas deep in the abdomen, the rectus is contracted and the tumor is not easily felt from outside, but the infiltration and hardness are felt by the rectum. But if perforation takes place directly into peritoneal cavity, the tumor is absent, both by external examination and by the rectum. Hence, if with severe symptoms no tumor is felt and the peritonitis spreads, the prognosis is very grave; or if a tumor that could be felt disappears with the coming on of severe symptoms, the case is likewise very grave. When perforation takes place into the general peritoneal cavity and septic peritonitis occurs, the symptoms are sometimes very deceptive. After the first onset of pain that may not last but a few hours, the pulse becomes normal, the temperature is only slightly elevated, the pain disappears to a marked degree, and while fatal mischief is going on, the patient may not present any grave symptoms.

Pepper says: "After the occurrence of the first pain, the fever may not rise very rapidly for two or three days with moderate pain. . . . These cases may be viewed as not being seriously ill, so delusive may be the symptoms after the subsidence of the first pain."

It is of the greatest importance, then, if there be the history of sudden pain, with collapse, and the symptoms of perforation, not to be deceived by this apparent calm, but by a very close examination to determine whether septic peritonitis does not exist. And although the general symptoms may be deceptive, the fæces of such patient, the condition of the capillary circulation in the

extremities, the cold hands, the condition of the respiration, the vomiting of brown fluid, along with a close examination of the abdomen, generally give indications of the fatal mischief going on.

If, then, from the moderate severity of the symptoms, the nature of the vomited matter, the relations of the tumor, we come to the conclusion we have the mild form of perityphlitis to deal with, medical treatment is all that is needed for the first three or four days. If at the end of that time the symptoms do not improve, or the temperature shows marked exacerbation, or *vomiting* or *chills* takes place, if the tumor remains large and tender, then exploratory puncture or incision over the tumor is proper. But if from the high fever, quick pulse, brown vomiting, absence or relations of the tumor by rectal examination, one concludes that perforation with abscess or other severe process, like gangrene, is going on, the resort to operation is the proper treatment. As a rule, it is safe to wait till the third day. "Indeed, I would venture to think that surgical interference before the fifth day should not be undertaken except in the presence of very emphatic symptoms. The great majority of operations are performed after the first week" (Treves). But urgency of symptoms may require operation even earlier. One of Bull's cases was operated thirty hours after first symptom.

In the cases of general peritonitis from perforation, as soon as the diagnosis is made out, it is the common consent of all the best surgeons that laparotomy and general cleaning of the peritoneal cavity offer patient the best chance.

In conclusion, I will say that the study of the symptoms of perityphlitis in relation to a correct diagnosis is of the greatest importance, and that more is to be accomplished in this direction by recording and studying the common cases of the disease in connection with the presence or absence of these diagnostic symptoms than by reporting rare or obscure cases. Exploratory laparotomy should be the exception; and by close study and examination of those symptoms that experience shows to be diagnostic, we should strive to be able to tell beforehand the conditions existing in the peritoneal cavity.

## MALFORMATION OF THE INTESTINE.

BY G. H. COCKS, M.D., NEW YORK.

I was called by a midwife on the evening of January 13, 1891, to see a female child, born that morning. The child had had no fæcal evacuation. The anus appeared perfectly normal. I introduced a probe to the depth of one and half inches without difficulty. I ordered an enema of hot water and soap.

I called next morning; found abdomen much distended, the child crying as if in great pain; no fæcal movement after enema. I gave an enema myself, but nothing came away but a little mucus. I then introduced my little finger in the anus until I passed the promontory of sacrum, but did not find any meconium.

Believing there was some obstruction to the lower part of the intestinal tract, I advised an ilio-colotomy. This the father refused. The child died thirty-six hours after birth.

*Autopsy.*—Body appeared perfectly normal, limbs well developed, abdomen greatly distended. On opening abdomen, found general peritonitis. The folds of intestine were all glued together. The intestine which presented was of large calibre, about size of small intestine in adult, filled with a fluid material, and terminated in a blind sac in left iliac region. Tracing this tube upward, found it to be continuous with stomach. Directly beneath the small intestine was another tube filled with soft fæcal matter, until within two inches of anus.

This tube commenced in a blind sac, was about the diameter of a lead pencil; held to the small intestine, about two inches from duodenum, by peritoneal adhesions.

A normal vermiform appendix was given off from this tube, fifteen inches from anus.

It was plainly evident that no operation would have benefited the patient.

## THERMOMETER IN THE STOMACH.

There is said to be in New York a young man who has a clinical thermometer in his stomach. It appears that while the nurse was taking his temperature he fell asleep, and was awakened by a choking sensation, caused by the thermometer as it passed into the pharynx.

# THE BROOKLYN MEDICAL JOURNAL.

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## *EDITORIAL.*

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### RESUSCITATION FROM DROWNING.

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Our readers will doubtless recall the sad accident which occurred at Red Bank, N. J., some time ago, in which a boy was drowned, and his father saved by the medical skill and common-sense of Dr. E. J. Harvey, a graduate of Long Island College Hospital and a former practitioner of Brooklyn.

The facts were as follows :

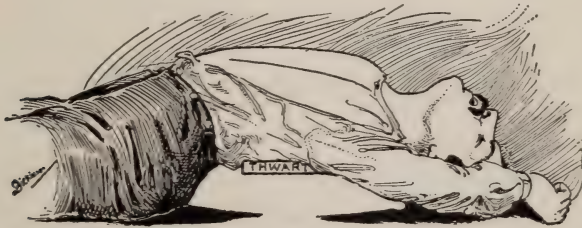
The father and son had gone out fishing in a canoe of the Rushton pattern, and in some way, not yet explained, the boat overturned and they both fell into the water. Dr. Harvey happened to be out rowing at the time the accident happened, although he saw nothing of its commencement. When he first noticed the man in the water, he thought he was bathing ; but as his body, or rather shoulders, at times seemed to be thrust higher from the water than a swimmer would naturally do, and as he in a little time disappeared from view altogether, Dr. Harvey determined to row to him, though he was not at all sure but that he would find an ordinary bather swimming about a boat. The distance to the man was about a quarter of a mile, and took the doctor about



three minutes to cover. It took half a minute to get the man in the boat, so that there was complete submersion three and a half to four minutes.

At our request, Dr. Harvey has kindly given us an account of the method he employed in resuscitation, and Dr. Dickinson has prepared an illustration which will make the explanation clearer. The doctor writes :

“When I reached the man I dragged him in at the bow—the bow or stern being the proper places to get weights into boats with the least danger of capsizing. When brought into the boat he had been submerged from three and a half to four minutes and was entirely relaxed and unconscious ; respiration had ceased, and the face and lips were livid. He was at once placed upon his back, his shoulders on a thwart, his neck unsupported, and the back of his head resting upon the bottom of the boat, some five inches below, the upper surface of the thwart supporting the shoulders. The arms were extended beside the head, as in the Sylvester method. The clothing was removed from the neck. The position was something like this :



“As soon as the head was thus depressed, a quantity of water poured from the mouth and nostrils ; this flow of water was increased by lifting the shoulders from the thwart and still higher above the level of the head. When the flow stopped, the patient began to gasp ; his shoulders were then replaced on the thwart. Breathing was gradually reëstablished. At first a good deal of foam and mucus obstructed and issued from the mouth and nostrils, and were wiped away ; in a short time they ceased to form.

“It must have been half a minute after getting him aboard when the patient began gasping. It was my intention to use the Sylvester method of artificial respiration, but as the respiratory efforts continued and increased in frequency, I allowed the arms to remain extended and did not flex and compress them against the chest.

"As soon as respiration was firmly established, though stertorous, the unconscious patient was brought ashore and got into bed. He was then put in the care of his family physician. I am told that he did not recover consciousness for five hours after the accident, and that hypodermic injections of stimulants, etc., were used. He is about thirty years of age, of medium weight and size, and was not in very good health nor well nourished at the time of the accident."

In "Holmes' Surgery," Vol. V., p. 906, Wood's Edition, 1875, in a report made by an English committee, they state: "When the head of the subject was allowed to hang back over the edge of the table, air seemed to pass into the chest more readily than when the back of the head rested upon the table." In the case just related, the elevation of the thorax and the depression of the head appear to have been of good service.

The method adopted by Dr. Harvey is so simple and so easy of application that we feel it a duty to call the attention of our readers to it, at a season of the year when drowning accidents are so frequent.



### THE BROOKLYN HOME FOR HABITUÉS.

Dr. J. B. Mattison has established, at 185 Brooklyn Avenue, a home for the treatment of those suffering from either the opium, chloral or cocaine habit. It is claimed that it is the only one of its kind in the world. The treatment of these patients is original, humane and effective. The first stage effects, in proper cases, complete narcotic quitting in ten or twelve days, avoiding the painful ordeal of abrupt disuse or the tiresome delay of prolonged disease, and, meantime, by a special employment of bromide of sodium, secures a sedative which contracts and controls, in large degree, the nervous derangement incident to entire withdrawal. The second stage includes sedatives and stimulants, hot baths, electricity, etc. The third stage comprises tonics, soporifics and full feeding, an essentially roborant regimen. The usual length of treatment is four weeks, in simple cases. We are informed by the doctor that one-fourth of the capacity of the Home is devoted to cases that cannot afford to pay. The consultants are Drs. Skene, McCorkle, Pilcher, Mathewson and Shaw.

SERENER SUMMERS FOR INFANCY.

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It is a notable experience that the number of so-called cases of summer complaints among young children has greatly decreased within the last twenty-five years. Indeed, the number has diminished markedly in each five years of observation. This is not a record of the Health Board, but a matter of observation. Vital statistics, which for the most part are a detail of deaths and the causes thereof, are very slightly suggestive of the diseases prevalent for the time being. By recording and locating a given number of deaths, they do show, however, a relative excess of a given disorder in certain localities. Within the limits of a crowded city, a deduction from the printed record must needs be drawn with many allowances. There are certain districts in Brooklyn, for instance, largely built up with tenement houses. There are certain other districts in which there is a large number of tenement houses, though the greater space in such districts is occupied by houses containing one or but two families in each. Comparing the death record from intestinal diseases in children under two years of age in the two districts, within a given period, the inference as to the prevalence of intestinal disease at that time would not be accurate as to the influences of a crowded neighborhood in conducting such disease, unless, indeed, the analysis went further and disclosed the immediate surroundings wherein such deaths occurred.

In general, however, the records in the Health Office confirm the general experience that there has been a notable diminution of intestinal disease in the summer months in Brooklyn during the past quarter of a century. The excess of infant mortality in the tenement-house sections the records still show, though they do not show that the average prevalence of these diseases is less, though the mortality is still high. This diminution is a luminous experience among physicians having the care of families other than residents of the tenement house. There has been an amelioration of prevalence in the crowded districts, but it is not accurate to say that the physician of twenty-five years' experience has been relieved from tenement-house practice and has come up among wiser people in his later life. This may be true, but it is not the whole truth. The medical profession has not existed in vain. It has not only learned better methods of treating disease, but it has been fruitful in expedients which have educated the people up into better modes of living and so prevented the former prevalence

of certain diseases. The city is in a better sanitary condition than it was twenty-five years ago. The poor and the rich have been benefited by this better sanitation. The introduction of refrigerator cars and the opening up of more rapid lines of transportation have caused our market to be better and more variously supplied than it was formerly. The diet of both rich and poor has improved. The abundant supply of good milk at low rates is a very suggestive change from former days, and the skill of physiological chemists has supplied the market with an amount of nutritious and easily assimilable food products that have revolutionized the dietary of artificially-fed infants.

In this respect, as in many others, the younger race of medical men have come into their calling relieved of a great embarrassment. The intestinal flux of infancy, in its many forms and in the prevalence of former days, was a serious aggravation of life in the summer solstice. The children did not all die—far from it; but many medical men will recall the long, tedious and numerous cases of intestinal weakness that began during the first hot days of May and lingered into the fall, but which, thanks to better sanitation, more varied food and more catholic knowledge, are now a memory and not the expected grief of mid-summer.

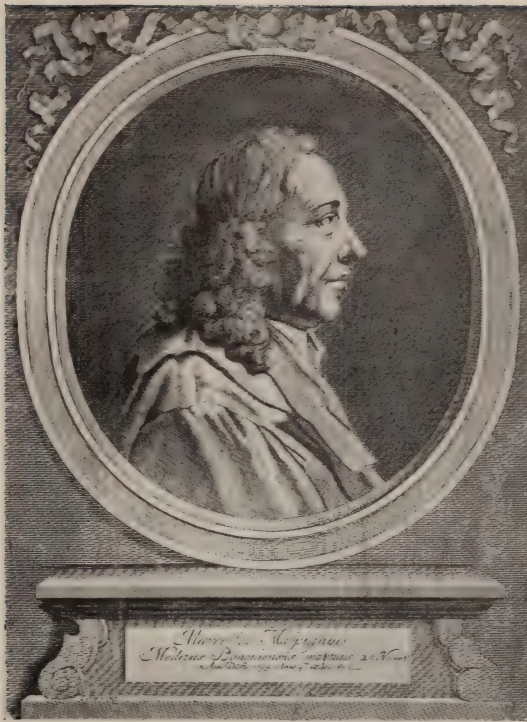


#### STERILIZED MILK FOR THE POOR.

The Brooklyn Diet Dispensary has recently added sterilized milk to its list of food preparations, and is now prepared to supply, for the use of hand-fed infants or adults requiring it, the best quality of cow's milk, thoroughly sterilized, in small Soxhlet bottles, containing sufficient milk, when diluted, for two feedings.

For the class of patients who might successfully conduct home sterilization, this project will prove a great convenience; while for such whose means or intelligence are not sufficient to obtain and keep milk of good quality, it will provide absolutely germ-free milk, which will not decompose at all before opening, and very slowly after opening, at no greater cost than that of an impure article.

It is the hope of the managers of this charity, if the condition of its treasury will permit, to dispense special mixtures of milk, cream, lime-water, barley-water, etc., either plain or peptonized, upon the formula of the physician, these mixtures to be sterilized and given out in nursing-bottles, each to contain the amount directed for one feeding.



MARCELLUS MALPIGHI.

The completion of the great work of demonstrating the entire circulation of the blood was accomplished by MARCELLUS MALPIGHI.

Although Harvey had correctly inferred the existence of the capillary circulation, he had never seen it; and it was reserved for this distinguished Italian physiologist to see for the first time by the aid of his microscope, the marvelous spectacle of the blood coursing through a network of small tubes on the surface of the lung and of the distended urinary bladder of the frog.

His discovery of the capillary circulation was given to the world in the form of two letters: *De Pulmonibus*, published at Boulogne in 1661. These letters contained also the first account of the vesicular structure of the human lung, and made a theory of respiration for the first time possible.

Malpighi also discovered the rete mucosum, sometimes called the rete Malpighi; and his name is still associated with the vascular coils in the cortex of the kidneys, and the follicular bodies of the spleen. He also first described the minute anatomy of the liver; and was associated with his friend and colleague in the University of Pisa—the celebrated Borelli—in asserting that the muscular fibres of the heart were of a spiral form.

This father of Microscopic Anatomy was born near Boulogne, March 10th, 1628, and took his doctor's degree from his home university, which at that time enjoyed a great reputation as a school of medicine, in 1653. In 1656 he was made a professor in his alma mater, which he, however, held but a short time, being called to the Chair of Theoretical Medicine in the University of Pisa, where he was the colleague and enjoyed the friendship of the celebrated physician Borelli; "to whose instructions," Malpighi often avowed, "was owing entirely all the discoveries he had made." He afterwards returned to Boulogne, and from thence was called to the chair of physic in the University of Messina; which he left at the call of Pope Innocent XII, to become his physician. On the 25th of July, 1694, he had a fit of apoplexy at the Quirinal Palace, from which he died on the 29th of November. It was said that two pounds of coagulated blood were found in the ventricles of his brain by Baglivi.

Malpighi has, too, an honorable position among naturalists; his "Anatomy of Plants," and work on development of the chick in the egg, are classical works in their respective departments.

He is described as a man of serious and melancholy temperament, indefatigable in the pursuit of knowledge on the sure ground of experience and observation; ever candid in his acknowledgments to those who had given him any information, and devoid of all ostentation or pretension on the score of his own merits.



## PROCEEDINGS OF SOCIETIES.

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### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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A regular monthly meeting of the Medical Society of the County of Kings was held in the Society's rooms, 356 Bridge Street, on Tuesday evening, May 19, 1891, at 8 o'clock.

Dr. West in the chair.

There were about 150 members present.

The minutes of the previous meeting were read and approved.

The Council reported favorably on the applications of the following gentlemen, and recommended that they be elected to membership:

Drs. James L. Cornell, F. M. Nehrbas, Eugene P. Hickok, Thomas A. York, Richard Slee, James P. O'Hanlon, Phillip H. Berlenbach, Henry M. Hufnagel, Geo. Chaffee, R. Curtis Gray, Edward H. Babcock, George G. Ward, Francis I. Leonard, Thomas L. Fogarty, William H. Clowminzer, Charles P. James, Robert J. Morrison, Charles W. Brunner and Geo. Boucher.

#### APPLICATIONS FOR MEMBERSHIP.

Under this order of business the chair called for the report of the Committee on New Members which was appointed at the previous meeting.

The chairman of the committee, Dr. Raymond, presented the following report:

Two days after the April meeting, your committee issued the following letter to all physicians registered at the County Clerk's Office who were not already members of this Society:

BROOKLYN, April 25, 1891.

DEAR DOCTOR:

The undersigned, a Special Committee of the Medical Society of the County of Kings, extend to you, on behalf of that organization, a cordial invitation to become a member. This Society is the oldest in the country, having been organized in 1822, and is by far the largest, its present membership exceeding four hundred.

The Society offers the following inducements to its members:

1. It owns the building, 356 Bridge Street, in which are its meeting-rooms and library.
2. Its medical library is the best in the city, containing more than 4,000 books and pamphlets.

3. Its reading-room contains more than 200 journals, which are received regularly, including all the best medical journals published.

4. Its members receive monthly the *BROOKLYN MEDICAL JOURNAL*, the only medical journal published in the city, which contains each month original articles by the leading Brooklyn surgeons and physicians; the proceedings and discussions of most of the medical societies of Brooklyn, and abstracts from all the principal medical journals of the world, which are made by experts in their respective departments.

The annual expense connected with membership, carrying with it all these privileges, is but \$5.00, which includes the initiation fee.

Should you desire to join the Society, be kind enough to fill out and mail, as soon as possible, the enclosed postal card, and the committee will take pleasure in recommending and endorsing you.

We are, very truly,

(Signed) J. H. RAYMOND, M.D.,  
GEO. MCNAUGHTON, M.D.,  
*Committee on New Members.*

With each one of these letters was enclosed a postal card on which the applicant had simply to write his name, residence, college and year of graduation. We have received a number of applications, which I will hand in to the Secretary.

The following applications were then read :

Dr. Charles Ware, 135 Remsen Street, Coll. P. and S., New York, 1883.

Dr. James Albert Meara, 4 Lafayette Avenue, Dartmouth Med. Coll., 1888.

Dr. Jay H. Radley, 51 W. 12th Street, N. Y., Coll. P. and S., Chicago, 1889.

Dr. James Aloysius Roache, 970 Bedford Avenue, L. I. C. H., 1890.

Dr. Walter O'Brien, 165 v Baltic Street, Univ. Med. Coll., 1890.

Dr. George Sauer, 1039 Third Avenue, Univ. of Vermont, 1890.

Dr. John Kepke, 318 E. 18th Street, New York City, Bellevue Hos. Med. Coll.

Dr. William Edward Jenner, 429 Henry Street, L. I. C. H., 1889.

Dr. Heydon Starrett, 178 Stuyvesant Avenue, Coll. P. and S., New York, 1880.

Dr. Ralph Hayward Pomeroy, 106 Berkeley Place, L. I. C. H., 1889.

Dr. James Madison Horton, 232 Putnam Avenue, Coll. P. and S., Baltimore, 1890.

Dr. Leonie Hurlimann Fordham, 384 12th Street, Syracuse Med. Coll., 1889.

Dr. Edward Morgan, 12 Underhill Avenue, Penn. Med. Coll., Philadelphia, 1879; Univ. Med. Coll., 1888.



Dr. Charles Paul Becker, Hall Avenue, near Atlantic, L. I. C. H., 1866.

Dr. Samuel Brothers, 93 Madison Street, New York City, Coll. P. and S., 1890.

Dr. Francis Mansfield, 140 Berkeley Place, Coll. P. and S., New York, 1885.

Dr. John James Paulson, 335 15th Street, L. I. C. H., 1891.

Dr. Walter Alfred Morton, 324 Gold Street, Dartmouth Med. Coll., 1889.

Dr. Salvator Gomez, 359 9th Street, L. I. C. H., 1891.

Dr. Edgar Slayton Holt, 422 Clermont Avenue, Univ. Med. Coll., New York, 1884.

Dr. Thomas Michael Buckley, 34 Clinton Street, L. I. C. H., 1891.

Dr. Emil Constant Bernauer, 253 Stockton Street, Univ. Med. Coll., New York, 1891.

Dr. Norman Hyde Hudson, 1811½ 3d Avenue, Birmingham, Ala., L. I. C. H., 1890.

Dr. Elmer F. Berkele, 610 Willoughby Avenue, Coll. P. and S., New York, 1890.

Dr. Samuel Glasgow Armor, Long Island College Hospital, L. I. C. H., 1891.

Dr. Herman L. Armstrong, 135 Clinton Street, Med. Coll. of Ohio, 1881.

Dr. Belle Voorhees Aldridge, 206 Garfield Place, Woman's Med. Coll. of Pennsylvania, 1886.

Dr. Benj. Earle Bostwick, Long Island College Hospital, L. I. C. H., 1891.

Dr. Addison Luzerne Coville, Bellevue Hospital, New York City, Coll. P. and S., New York, 1890.

Dr. Samuel Frederick Anderson, 672 Degraw Street, L. I. C. H., 1890.

The following applications were also presented:

Dr. William Adolph Myers, 1404 Bushwick Avenue, Univ. Med. Coll., New York, 1887; proposed by Dr. P. Scott; Benj. F. M. Blake, M.D.

Dr. Geo. J. Dirkes, 540 Madison Street, Coll. P. and S., New York, 1889; proposed by Dr. C. N. Cox; Frank E. West, M.D.

#### SCIENTIFIC BUSINESS.

The papers of the evening, as follows, were read by Glentworth R. Butler, M.D.:

1. Note on Gastric Ulcer and Allied Conditions.

2. Case of Œsophageal Perforation as a Result of Typhoid Ulceration—Recovery. No discussion.

UNFINISHED BUSINESS.

In accordance with the notice given at the last meeting, Dr. Raymond moved the adoption of the resolutions in regard to medical expert testimony. The resolutions were then read, as follows :

*Whereas*, The medical expert witness is at the present time held in less repute than formerly, and his opinions have lost much of their force with both judge and jury; and

*Whereas*, Such diminished respect for the medical witness tends to injure the profession as a whole and to lessen its influence; and

*Whereas*, It seems probable that the status of medical expert testimony may be improved by united and harmonious action of the profession looking toward that end;

*Resolved*, That it is the sense of this Society that it is derogatory to the best interest of the medical profession for any of its members to occupy in a legal trial the position of medical adviser to counsel and witness in the case;

*Resolved*, That it is the sense of this Society that the physicians who are called upon to give evidence in legal cases with reference to the existing physical conditions of patients, should insist, if it be possible, upon meeting in consultation the physicians to be called by the other side, so that there may be a full interchange of views before they testify.

This motion was seconded by Dr. Colton.

After some discussion, a vote being taken, the resolutions were declared adopted.

The report of the Obituary Committee on the death of Dr. Sidney Allen Fox, presented by Dr. Maddren, was read, received and placed on file.

NEW BUSINESS.

A communication was received from Dr. J. Barney Low, calling attention to Section 1, Chapter XL., of the Laws of 1890, entitled "A Law for the Prevention of Blindness," as follows :—

"Should any midwife or nurse having charge of an infant in this State notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant to report the fact in writing within six hours to the Health Officer of the city, town or district in which the parents of the infant reside.

"Any failure to comply with the provisions of this act shall be punished by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months, or both.

"This act shall take effect on the 1st of September, 1890."

—asking that a committee be appointed to wait upon the District Attorney and urge the enforcement of this law.

On motion of Dr. Raymond, duly seconded, the chair appointed the following gentlemen as such committee: Drs. J. Barney Low, Nelson L. North and Fred'k K. Price.

The President announced the death of Drs. Paul H. Kretzschmar and William Anderson, and appointed the following Obituary Committees:

Drs. Geo. G. Hopkins, Samuel Sherwell, Chas. E. De La Vergne on the late Dr. Kretzschmar.

Drs. John Harrigan, Henry N. Read, Henry K. Bell on the late Dr. Anderson.

Previous to adjournment the chair cordially invited the members and guests present to partake of the refreshment which had been provided by the committee.

There being no further business, on motion, the meeting adjourned.

W. M. HUTCHINSON,  
*Secretary.*

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## PROGRESS IN MEDICINE.

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### SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

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#### THE TREATMENT OF PSEUDO-ARTHROSIS.

Mikulicz (Königsberg), (Report of Congress of German Surgeons, Berlin, April 24-29, 1889; *Centralblatt f. Chirurg.*, 1889, No. 29). In those cases in which the usual methods to procure union of fractured bones fail, M. has resorted, with success, to the use of chemical irritants. Of these he particularly favors oil of turpentine. An incision is made, about 10 ctm. long, over the site of the pseudo-arthritis down to the periosteum; this latter is then incised for the entire length of the incision in the soft parts and separated from the ends of the bones throughout the entire circumference of the latter. The space between the periosteum and bone is then packed with gauze soaked in oil of turpentine. This is allowed to remain in situ for from four to five days. At the end of this time

the gauze is removed, and the parts thereafter packed every second or third day until the wound is healed. But moderate pain attended the changes of dressing.

With the exception of but a single case, which resisted all treatment, M. was invariably successful by this method. In one case particularly, the result was a most striking one. The case was one of a young man of twenty-two, who had suffered, three years prior to coming under observation, from osteo-myelitis of the tibia. Almost the entire diaphysis became necrotic. After removal of the sequestra shortly following the onset of the disease, only the upper third of the bone was restored. Between this and the inferior epiphysis a defect of 15 cm. existed, for which length the bone was substituted by a cicatricial cord. In this case M., supposing the latter to contain some osteo-plastic tissue, separated the periosteum from the conical upper fragment, and split the fibrous cord above referred to, for a short distance, into two lateral halves. These latter were again subdivided longitudinally several times; thus, as a final result of this, the cicatricial cord at its upper portion was separated in a series of longitudinal segments. Between these, turpentine gauze was packed. This operation was repeated in subsequent séances, as well at the lower as at the upper fragment; these were successively lengthened, until at the end of nine months and after five operations, the entire defect was filled with solid bone, which in some places surpassed in thickness the normal tibia.

M., in recommending the employment of this method, considers it not infallible.

In the discussion which followed, Hahn, of Berlin, in a similar case of large defect in the tibia, implanted the fibula from the same limb into the same, with good result.

V. Bergmann, of Berlin, up to this time, had seen no good results follow the turpentine treatment of pseudo-arthritis.

#### ORIGIN OF POPLITEAL CYSTS.

Poirier (*Progrès Méd.*, 1890, No. 43). These, according to P., usually arise from the joint capsule. Four varieties are distinguished: 1. That which arises between the semi-membranosis and the inner head of the gastrocnemius. This is the most common form. These are brought more prominently into view by strong flexion of the knee, the projection usually passing, during this act, beneath the anterior surface of the gastrocnemius. The seat of this cyst is generally the bursa, between the semi-membranosis and the gastrocnemius, which communicates frequently with

the joint cavity. 2. Somewhat less in frequency are those which owe their origin to a decided projection of the synovial membrane into the popliteal bursa. In fully one-half of the cases these structures communicate directly with each other. 3. Those which occupy the upper portion of the popliteal space near to one or the other of the condyles. There occur in this situation normally small projections of the synovial membrane, which are found between the fibres constituting the origin of the gastrocnemius, and which may lead to the formation of cysts. 4. Those arising from synovial crypts or follicles. These are generally very small, and are considered synovial hernias. They may occur at any portion of the knee, and are analogous to ganglions in the region of the wrist.

#### LIGATURE OF THE FEMORAL ARTERY AND VEIN.

H. Zeidler (*Berliner klinische Wochenschrift*, 1890, No. 39). The author's views regarding the necessity for simultaneous ligation of the femoral artery and vein, when necessity arises for the performance of this operation upon either, are opposed to those which hold that, without this precaution, gangrene of the limb is more apt to occur. In twenty-two cases of ligation of the vein, gangrene was observed in but a single case; this, together with four others, being instances of accidental injury to the vein, while the remaining twenty were cases of ligation of the vein in the course of operations for the extirpation of tumors. Ligation of the artery alone furnishes a more frequent cause of gangrene than isolated ligation of the vein; as for instance, out of five recorded cases, according to Z., two terminated in this condition. Of the cases of simultaneous ligation of both artery and vein, nearly fifty per cent. (twenty-four out of fifty cases) terminated in gangrene. Ligation of the artery exercised no influence upon venous hæmorrhage. Ligation of the vein alone demands suspension in the after-treatment; in case of ligation of the artery, the horizontal position is to be maintained.

#### THE SURGERY OF THE GALL-BLADDER.

Th. Voigt (*Deutsche med. Wochenschrift*, 1890, No. 34). The author reports, for Dr. Hensner, thirteen cases of the so-called ideal cholecystotomy, after the manner of Bernays-Küster, all of which made good recoveries without recurrence. Two of the cases are worthy of mention, from the fact that in the one the symptoms of an impacted gall-stone simulated an acute peritonitis; while the other possesses an especial interest from the fact that a

walnut-sized calculus became impacted in the duodenal extremity of the common duct, which resisted all efforts at displacement. Failing to force this either into the bowel or gall-bladder, or to crush it, the operator proceeded to incise the duct and to remove it therefrom. He was not entirely successful in the subsequent suturing of the duct, and therefore was impelled to insure drainage by position. The exceedingly favorable results which have followed H.'s operations by the ideal method has wedded him to the procedure, and therefore the value of other methods is not discussed. The favorable results obtained in these cases tends to prove the reliability of sutures of the gall-bladder, although surgeons, as a rule, distrust this. The double intestinal suture of Czerney is quite safe; should, however, this be distrusted, tamponing with iodoform gauze or drainage may be added.

#### THE TREATMENT OF IRREDUCIBLE LUXATIONS OF THE HIP-JOINT.

Oscar Bloch, Copenhagen (*Revue d'Orthopédie*, May, 1890, No. 3). Fifteen cases are reported in which operative measures were resorted to. In four of these tenotomy alone was performed. In one case arthrotomy with reposition from before backward; in eight cases resection, two of which were sub-trochanteric; in one case the head, in a condition of necrosis and lying in an abscess cavity, was removed; in two cases sub-trochanteric osteotomy was performed. In only one case is a fatal result recorded (gangrene after one and a half months). In one of the tenotomy cases no improvement took place. In two cases (one of removal of the head of the femur and one of osteotomy) the improvement was but slight. In eight cases very good results were attained. Of these latter, seven were resection cases and one of osteotomy. Four of the cases—two of resection and two of tenotomy—are lost sight of. The pathological conditions had been in existence from four days to twenty-one months. Age of the luxation seems, according to B., to bear no relation to the irreducibility, and the cause of the latter may be so obscure as to escape diagnosis altogether. Certainly, in all cases, the obliteration or filling up of the acetabulum is of the first importance in preventing replacement. After seventy-four days this condition has been observed. Replacement by open incision is not therefore necessary under from one to two months. In case of separation of the head of the bone in conjunction with a dislocation, the removal of the head is advised; repair of the fracture is purely problematical; and, even although this take place, the integrity of the union would be seriously endangered by future efforts of reduction. In other cases an im-

provement to the extent of toleration of the displacement may be brought about by means of extension. After two or three months, however, it becomes an open question whether further improvement is possible or operative measures are to be resorted to. Should the latter course be pursued, the choice lies between resection and osteotomy. The latter may be either supra- or infra-trochanteric; the formation of a new acetabulum by dissecting out and removal of the adventitious tissues in its cavity follows.

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## OBSTETRICS.

BY CHARLES JEWETT, M.D.,

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### MORPHINE IN PREGNANT, PARTURIENT AND NURSING WOMEN.

Fürst (Arch. d'Obstet. et de Gyn., March, 1891). Owing to the contradictory opinions on the subject, F. has made a study of the effect upon the foetus, of morphine administered to the mother. One woman during her first pregnancy had taken about 1,200 hypodermic injections of a three-per-cent. solution of morphia; during her fourth pregnancy 800 of a similar solution were taken. The children were well developed physically and intellectually—and they had not acquired the morphine habit. Before birth, however, the foetus were quiet after the exhibition of the drug to the mother and the movements became painfully active when its effects passed off. From this and similar observations F. concludes that morphia does not compromise the life or health of the foetus to so great an extent as has been assumed. Its moderate use in pregnant women is without danger and it may be given with advantage in the treatment of threatened abortion or premature labor. During labor its use is more dangerous, especially in prolonged labor. In nursing women the drug passes rapidly into the milk.

### STERILIZATION OF CATGUT.

(Centralblatt f. Gyn., April 4, 1891.) Kammeyer, of Berlin, after trial of all the recent methods of sterilizing catgut concludes

that the only reliable method for killing the spores of anthrax is dry heat at 140 C. (284 F.) for one and a half to two hours. Koch recommends a temperature of 145 C. (293 F.) for three hours. The lower temperature and the shorter time have been found entirely satisfactory in practice, however.

#### RIGIDITY OF THE CERVIX UTERI DURING LABOR.

Porak (*Arch. d'Obstet. et de Gyn.*, February, 1891). The author thinks the structure of the cervical tissues as well as the activity of the longitudinal muscular fibres of the corpus uteri should be taken into account in the etiology of rigid cervix. Failure to demonstrate definite alterations of structure in the cervical tissues of these cases does not justify the assumption that there is no lesion. The intimate structure of the muscular fibre may be modified and the anomaly escape detection by the microscope. Uterine inertia must be a factor in the non-dilatation of the cervix even in early rupture of the membranes or in œdema. But clinical experience teaches that there is in a certain proportion of cases from the beginning of labor a condition of the cervical tissues unfavorable to dilatation. The solution of the etiological problem the author thinks is to be sought by studying the anatomy and physiology of cervical softening during pregnancy.

#### INDUCTION OF LABOR.

Treub (*Arch. d'Obstet. et de Gyn.*, February, 1891), comments upon the disadvantages of the recognized methods of inducing labor and recommends the following. A section of soft rubber tubing is tied in the neck of a rubber condom. This apparatus is introduced into the uterus by the aid of a celluloid canula into which it is first inserted. Once in place the bag is injected with borated water by means of a syringe attached to the proximal end of the rubber tube the carrying canula being at the same time partially withdrawn. When the bag is filled the tubing is ligated and the celluloid canula removed. A pad of iodoform gauze is then placed against the cervix. Delivery follows, on an average, in thirty-one hours. For the induction of labor in primiparæ the author uses the cervical tampon of iodoform gauze. This measure, however, has succeeded in only two cases out of five.



## PREVENTIVE MEDICINE.

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## WHAT ARE FILTH DISEASES.

In a paper on this subject, published in the "Sanitarian," for March, 1891, Dr. S. W. Abbot, gives this summary: "We may reasonably conclude that a filth disease is one in relation to which filth in some form or other, either wet or dry, plays the part of an important factor only in its causation, but is not itself the direct cause; that it acts either as a favorable soil for the propagation of disease germs (other favorable conditions also existing), or that it acts as a suitable medium or vehicle for the transmission of the particulate contagion from the sick to the well, as is probably the case in the inhalation of the bacillus tuberculosis in and with the dust of filthy or ill-ventilated apartments." We may also conclude that the filth which promotes the spread of infectious diseases is *specific filth*, hence the necessity of removing all filth is that thereby we are sure to remove the specific filth, or that which contains the germs of infectious disease."

He emphasizes the idea that filth does not cause disease, but that it serves as a breeding ground for specific germs of disease; that filth is a condition favorable to the production of disease, but that it does not cause it. The diseases which he classes as filth diseases are: Tuberculosis, scarlatina, puerperal fever, typhoid, cholera, yellow fever and diphtheria, although in this last disease the relation to filth is not so clearly established. It is well that sanitarians should define the true place of filth in connection with disease, as there is no little confusion in the public mind as to their true relations.

## THE ADULTERATION OF ALCOHOLIC BEVERAGES.

The Third Biennial Report of the Dairy Commissioner of Minnesota contains the following remarks, which are of importance to physicians: That there are extensive adulterations and sophistications of wines practiced in the United States, no one will question. It must not be assumed, however, that all wines upon the American market are necessarily of this character, since there is not a particle of evidence to support such a claim. There are sections of this country that produce wines of excellent quality, and there is no evidence on record to show that these native wines are

adulterated or sophisticated during their manufacture or before their sale. Chemical analysis of samples of California wines show them to agree closely to the accepted standards, and give no evidence of being other than pure and of good quality.

In the examination of beers, it was found that the principal sophistication consisted in the use of cheaper substitute for malt, either in the form of other grain: unmalted barley mixed with the malt, rice flour or glucose. The principal effect of these is the production of a beer which is poorer in albuminoids and phosphates, and is, consequently, less nutritious than it should be.

As substitutes for hop bitters, the report mentions picrotoxin and picric acid, but regards their use as rare.

Of preservatives, salicylic acid seemed to be the most popular, as nearly one-fourth of the samples examined contained it. No case of direct adulteration was discovered, all variations from the normal article being some fault of curing or clearing, and the above-mentioned substitutes in the manufacture.

The report deals harshly with foreign brandy. Most of the brandy imported to this country from France is of inferior quality, frequently by reason of absolute sophistication. The term "brandy" seems to be no longer applied to a spirit produced by fermentation of grapes, but to a complex mixture of alcohol derived from grain, potato or beet-root refuse. Potato and beet-root spirit is shipped into France from Germany and the United States. These are the most objectionable of all spirits, and hence brandy made from them is objectionable. They are flavored and colored, branded and labeled, and shipped to America in large quantity. Physicians frequently order brandy, while when they do so they can confidently expect that one of these mixtures will be supplied to the patient.

The report calls attention to the fact, further, that not one of the samples examined by the Dairy Commissioner of New Jersey in 1888 came up to the pharmacopœial standard. Most of the native brandies are genuine, although they have not been aged enough to make them bland and palatable, and many of them contain fusel oil.

The most of the samples of whiskey examined were deficient in alcoholic strength, and contained too much solid matter in the form of burnt sugar, glycerine, etc. Two out of fifteen samples examined were not whiskey, but artificial mixtures. Those that were genuine were not properly mellowed by age, and were, therefore, harsh, irritating and consequently disturb the digestion of drinkers, and make them unfit for medicinal use.

## REGREENING OF PEAS AND BEANS WITH SALTS OF COPPER.

According to the "Br. Med. Journal," Jan. 31, 1891, the Health Committee of Glasgow have notified the dealers in colored peas that they will institute proceedings for the sale of such articles, whenever the circumstances are sufficient to warrant a prosecution.

The medical officer of health, in a report to the Health Committee, says: "The process of regreening is essentially fraudulent in its intention and commercial results; that regreening with sulphate of copper certainly does not make vegetables more wholesome—probably always makes them less wholesome, and in some proportions undoubtedly does so; that the public ought, in purchasing preserved vegetables, to ask for ungreened, or at least for vegetables free from copper."

This report then gives the history of this industry in France, the seat of the practice, showing that since 1853 the practice has been prohibited in Paris, and since 1860 throughout France; that commission after commission have reaffirmed the decision, until in 1889, when the Consulting Committee of Hygiene adopted a report of M. Grimaux to the effect that "in the position of our information as to the noxious influence of salts of copper, there is no ground for prohibiting the practice of regreening with salts of copper."

There is a law in Germany against the coloring of food-stuffs, as also in Massachusetts; and as the French government have finally yielded to the wishes of the manufacturers, the consumers must now look out for themselves.

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PATHOLOGY.

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FURTHER PATHOLOGICAL REPORTS OF CASES TREATED WITH  
KOCH'S LYMPH.

Chiari (Prag. med. Wochenschr., 1891, No. 9). C. reports on seventeen more Koch cases. In seven there were no unusual autopsy findings. In five cases of severe phthisis pulmonalis he found marked "reactive" changes around the tuberculous foci in

the form of hæmorrhages, also fibrinous and purulent hepatization, which occasionally reached such a degree that there was no longer any aerated tissue. In these five cases decided reaction was observed in tuberculosis elsewhere located. Pericæcal suppuration was also found in a case of tubercular cæcitis, rupture into the rectum in a case of tubercular coxitis, and empyema in a case of pulmonary tuberculosis.

On the other hand, the findings in some cases demonstrated that here and there during the treatment changes which must be regarded as decidedly of a healing nature had occurred in the tuberculous tissue. Such observations were particularly made upon tuberculous laryngeal and intestinal ulcers, in which the tuberculous tissue was being dislodged and the ulcers becoming cleaner.

In two cases acute miliary tuberculosis supervened in chronic tuberculosis, but C. does not believe this to be in any way connected with the Koch treatment. He was also unable to convince himself in any of the cases of chronic tuberculosis that more rapid progress of the disease was consequent upon the use of the lymph.

#### TUBERCULIN.

B. Meyer (*Ibid.*) remarks relative to publications from Kasan, that tubercle bacilli were found in Koch's lymph; that already since the beginning of February the bacilli have been observed in the lymph at the Berliner Städtisches Krankenhaus in the Urban, both in the bottom and top strata of the fluid.

With the purpose of studying the vitality of these bacilli, three flasks were selected in which the bacilli were found, and from these three rabbits were inoculated in the anterior chamber of the eye, two rabbits and one guinea-pig subcutaneously, and one rabbit directly into the ear vein. Despite the lapse of five to six weeks since the injections, no evidence of tuberculosis is at hand. The assumption is, therefore, confirmed that the bacilli have been killed by the lymph.

#### EXAMINATION OF THE BLOOD FOR TUBERCLE BACILLI AFTER THE KOCH TREATMENT.

Hamerle (*Ibid.*), after examining the blood of twenty-seven cases, in some of which the examination was repeated again and again, fails absolutely to find any bacilli.

#### FURTHER ANNOUNCEMENTS CONCERNING KOCH'S TREATMENT.

Confirmatory of Virchow's announcements, Hansemann (*Therap. Monatshfte*, Jan. 20, 1891, Sondenheft) describes the pathological

findings consequent upon the Koch injections. These he divides into primary, secondary and tertiary appearances. The first originate in hyperæmia and œdema, which when in the lungs are the cause of the "injection-pneumonia;" but this actual reaction in Koch's sense did not appear in all tubercular processes. To the secondary changes H. assigns leucocytosis and proliferation processes in the vicinity of the tuberculous nodules. To the tertiary changes suppuration, as in the lung, and gangrene as was observed in the intestine. In no case—out of twelve autopsies—was cicatrization of tubercular foci observed. In a second publication (Berlin. klin. Wochenschr., 1891) the same writer speaks of the dangers of acute miliary tuberculosis from the injections. In all cases treated for a long time, numberless submiliary tubercles—not caseated—were found, which must have been younger than the first injections. Among these cases he autopsied three cases of fresh tubercular eruption in the epicardium; cases of which in the last ten years only six have been seen in the Berlin Pathological Institute.

Jacobi (Centralbl. f. allg. Path. u. Path. Anat., 1891, No. 2) excised portions of tubercular skin, both before and at various times during Koch's treatment. He found that the lymph injections induced very active inflammation, which originated in vascular dilatation, cell infiltration and fibrinous exudate. The suppurative condition described by Kromeyer was not observed by J.

Very remarkable pathological findings—from Baumgarten, published by V. Burckhardt (Med. Corresp. Bl. d. Wurtemberg, Arzth. Landesvereins, 1890, No. 33, 4-5)—were made in the organs of a lupus case dead of collapse after 0.01 c.cm. of lymph was injected. Fresh granulating interstitial nephritis, with widespread necrosis of the specific renal parenchyma, fresh renal hæmorrhages, hæmorrhagic and hæmoglobin cylinders; a hitherto unknown (?) form of nephritis.

Rutimeyer (Berlin. klin. Wochenschr., 1891, No. 6) describes a case of advanced pulmonary tuberculosis in a thirty-three-year-old man, in which, after sixteen days' treatment with Koch's lymph, tubercular meningitis supervened, followed by speedy death.

Liebmann (Deutsch. med. Wochenschr., 1891, No. 6) found tubercle bacilli in the blood of a number of patients that had been treated with Koch's lymph. Some of his preparations were examined by Ewald. Erlich and Guttman could not confirm this observation with blood from their patients. That death, even after

very cautious single doses, may occur, is proven by a case of Oppenheimer (Ber. klin. Wochensch., 1891, No. 3). A weakly twenty-two-year-old patient suffered severely with tuberculosis of the bone, which had healed in course of time; he received a trial injection of 0.002 c.cm., and died thirteen hours afterward with high fever—40° C. and 140 pulse—of cardiac syncope.

A medical student, J. V. M. (Wiener klin. Wochensch., 1891, Nos. 5-6), relates his own experience while under treatment for phthisis by Koch's method. He expresses himself as much pleased with it, and feels essentially bettered.

Jaksch (Prag. med. Wochenschr., 1891, Nos. 1-2) reports further on cases already reported on earlier in course of treatment. In all, including the very sick, the conditions were improving, and he expects definite healing in various cases.

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## OPHTHALMOLOGY.

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### INFLUENCE OF RETINAL AND CHOROIDAL VESSELS UPON THE NUTRITION OF THE EYE.

Wagenmann (Graefe's Arch. f. Oph., xxxvi., 4, p. 1) has studied the effects of section of the optic nerve and central retinal vessels, as well as of the ciliary arteries upon ocular nutrition. His experiments show the care evidenced in all work done under Leber's influence, and while he cautions against an *a priori* application of the results obtained by experiment on rabbits to the human eye, he concludes from such experiments as follows:

(1) Division of the optic nerve alone causes at first no ophthalmoscopic changes, but leads to gradual atrophy of the nerve fibres, and, to a lesser extent, of the ganglion cells, the retinal circulation remaining normal.

(2) Division of the nerve and central vessels produces immediate retinal anæmia, which is followed by gradual but incomplete restoration of circulation. Division of the central artery causes no opacity in the retina, and does not hasten the atrophy which follows section of the nerve alone.

(3) Unilateral section of long and short ciliary arteries produces rapid degeneration of all the retinal layers of that side, the first sign being a grayish-white opacity in the affected retina. The

nerve-fibre layer suffers least, and the restoration of choroidal circulation prevents the destruction of the retina on the affected side from being complete. Pigmentary deposits occur in the atrophic retina.

(4) Division of the optic nerve and central vessels, combined with section of the ciliary vessels on one side only, leads to rapid degeneration of the nerve-fibre layer on that side, as well as the ordinary retinal atrophy on both sides.

(5) Division of the optic nerve and all retinal and ciliary vessels leads to rapid destruction of the whole retina.

#### OBSERVATIONS ON THE FOURTH IMAGE OF PURKINJE.

In speaking of Purkinje's images, one usually assumes that there are three of them: the reflections from the anterior surfaces of the cornea, lens and vitreous body respectively. Purkinje himself, however, described a fourth image, due to reflection from the posterior surface of the cornea, and therefore upright. Helmholtz tried in vain to see this fourth image, and therefore assumed the parallelism of the corneal surfaces, although direct measurements proved the contrary.

Tscherning (*Arch. de Physiol.*, 1891, No. 1, Ref. in *Cent. f. P.* Aug., 1891, p. 105) saw this fourth image in every case during a series of observations on the shape and position of the lens. Oblique illumination and the use of a magnifying lens facilitated its demonstration. As long as the reflection from the anterior corneal surface occupies the middle of the pupil, one sees nothing of the reflection from the posterior surface (fourth image of Purkinje). When, however, the former approaches the pupillary margin, or, better, lies over the iris, the latter may be seen close to it as an upright faintly illuminated image of the flame. The distance between the two images increases as they approach the corneal margin, where it may reach or even exceed one millimetre. That the fourth image is really a reflection from the posterior corneal surface and not from the lens, is proved by the fact that it is visible outside the pupillary area. Its feeble illumination is naturally due to the slight difference in the refractive index of cornea and aqueous humor, the proportion between the brightness of the anterior and posterior corneal reflexes being, according to Tscherning, about 130-1. The size of this fourth image allows one to estimate the curvature of the posterior corneal surface, and Tscherning has found for a lateral point  $30^\circ$  from the visual line (where the radius of curvature of the anterior corneal surface was 9.76 mm.) the radius of curvature of the posterior surface to be

7.50 mm. Unfortunately, the curvature of the central portions of the posterior corneal surface cannot be measured in this way, but the author thinks himself justified in concluding that the posterior surface curvature is spherical, since the size of the fourth image scarcely increases at all as it approaches the periphery, while that of the anterior corneal reflex becomes rapidly larger under similar circumstances.

Besides the four images described by Purkinje, there is also a fifth image, only visible to the eye under observation. Tscherning proposes, in a later article, to consider this as yet undescribed reflex.

#### ON THE ACTION OF THE ULTRA-VIOLET RAYS ON THE EYE.

Widmark (*Nordisk Oph. Tidskrift*, iii., 2) confirms the results of his previous observations in this line. The ocular inflammations from the arc electric light are due not to retinal irritation, but to the direct action of the light on the anterior part of the eye, especially the ultra-violet rays. In the same way is produced the cutaneous erythema following exposure to strong electric or sun light.

These ultra-violet rays are markedly absorbed by the conjunctiva, totally by the iris. Of the transparent media of the eye, the lens absorbs most strongly the ultra-violet rays. After exposure of atropinized eyes to concentrated light containing ultra-violet rays, in three cases out of twelve incipient cataract was found by Widmark. Control experiments, where the ultra-violet rays had been excluded, gave a negative result. In cataract following lightning stroke, these rays probably play an important part.

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## DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

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#### THE ANATOMY AND PHYSIOLOGY OF THE FAUCIAL TONSILS WITH REFERENCE TO THE ABSORPTION OF INFECTIOUS MATERIAL.

Eugene Hodenpyl (*Amer. Jour. Med. Sciences*, March, 1891). This article presents a very careful and instructive study of tonsils, a subject of which we possess too little definite knowledge. The author classifies all lymphatic structures into three groups :



1. Those minute masses consisting of connective tissue, reticulum or basement substance, containing spheroidal cells in its meshes. These are found scattered through lungs, liver and kidneys.

2. Those nodules of lymphoid tissue found in walls of stomach and intestines—the solitary or agminated follicles.

3. The lymph nodes, incorrectly called lymph glands.

The tonsils belong to the second group. Their long axis, when the mouth is open widely, is nearly vertical. When mouth is closed they tend to approach each other, the long axis being nearly horizontal. They are composed of an aggregation of lymph nodules divided by diffuse lymphoid tissue, and arranged about the crypts, which are eight to fifteen feet in number. The crypts are lined with squamous epithelium, as is also the surface.

The fibrous tissue forming the reticulum is of two kinds: 1. That which is found in the nodules. 2. That which forms the stroma between them. The latter variety is coarser and more closely arranged than the former; both are lined by endothelium.

Of cells there are three kinds: *a.* Spheroidal, containing single nucleus of homogeneous or finely-granular character, occasionally containing vacuoles.

*b.* Cells which are multinuclear.

*c.* Large flat nucleated cells of irregular shape.

The lymphatic network occupies the entire tonsil. They consist of a series of closed canals, containing lymphoid cells, and probably do not open into reticular tissue either by stomata or by open extremities.

The epithelium presents certain peculiar alterations in the cells themselves; they change in shape and diminish in size. Also the epithelial layer contains small hollow cavities near the surface, which may be closed on all sides, or contain minute channels leading to the surface, through which lymph cells may be seen to pass. This modification is called rarefaction of the epithelium, and the covering of the tonsil at such points may be only one or two cells in thickness.

This structure greatly facilitates the passage of lymphoid cells to the mouth, and, in the opinion of the author, has an important bearing upon the absorption of bacteria and ptomaines, and in the production of certain acute infectious diseases.

The following experiments were made to explain the physiology of the tonsils and to ascertain their power of absorption:

1. The following substances were smeared upon the tonsils and buccal cavities of different animals: Olive oil, melted lard,

lanolin, finely-powdered carmine, and Berlin blue. These were allowed to remain in contact with the mucous membrane for from fifteen minutes to one hour; the animals were then killed, and the tonsils, tongues and walls of pharynges examined microscopically.

Minute particles of the fats and colors used were found only in the most superficial epithelial layer; in no case had any absorption taken place.

2. Solutions of aniline colors and insoluble carmine were injected beneath the mucous membrane in the vicinity of the tonsils. In one hour the animals were killed. Examination proved the tonsils had absorbed none of the coloring matter.

3. A small quantity of strong solution of atropine was injected beneath the mucous membrane of a dog's tonsil. In a few minutes the pupils became widely dilated; the dog shortly became sleepy and unable to stand.

4. Soluble and insoluble coloring matter was injected into the tonsils. Animals killed one hour later. Coloring matter found collected at point where tip of injecting needle penetrated. No tendency to diffusion. No color reached the surface of tonsil or was found in crypts.

*Summary.*—1. Soluble or insoluble materials are not absorbed by the mucous membrane of the mouth or pharynx or tonsils except to a very slight extent.

2. Tonsillar absorption is prevented by the epithelial covering. Substances in solution that penetrate epithelium may rapidly be taken up by lymphatics, and thus enter the general circulation.

3. The tonsils do not readily absorb either soluble or insoluble materials from surrounding tissues.

4. Soluble or insoluble foreign materials that may be in tonsillary substance are not thrown off by the free surface, but enter the lymphatic system.

In order to ascertain the frequency of tubercular tonsillitis, and to determine its relation to general tuberculosis, an examination was made of two hundred tonsils from persons of all ages, eighteen having died of tuberculosis pulmonalis. In only one case was a tubercular tonsil found, and that from a case of general tuberculosis.

From these results it is probable that: 1. Tubercular tonsillitis is a very rare affection.

2. The tonsils are rarely, if ever, the site of primary inoculation in pulmonary tuberculosis.

Rarefaction of the tonsillar epithelium affords a ready explanation of the manner in which the tonsils become affected in diphtheria.

Rarefaction of this epithelium is of constant occurrence, and as a result it may be so thin as to be but one or two cells in thickness. The contagium of diphtheria is an irritant and increases the desquamation; indeed, some sections show complete denudation, and the specific virus is, as a result, brought into immediate contact with lymphatics of tonsils, and by them carried into the general circulation.

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## GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

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### THE MENOPAUSE: ITS UNUSUAL COMPLICATIONS AND THE CONDITIONS FOLLOWING.

Thomas (*Annals Gynæcology and Pædiatrics*, May, 1891) divides a woman's life into four periods:

1st. Up to fourteen years—that of girlhood—the period of preparation for the function of ovulation and menstruation. 2d. The succeeding six years when she is preparing for the function of sexual intercourse. 3d. That of maternity, extending to fifty years. 4th. When functional activity of the organs of reproduction retrograde and atrophy of the ovaries, tubes and uterus is developed, in which the vagina contracts unless matrimony continue.

Formerly in the medical profession and yet among the laity undue significance was attached to the "change of life," and affections attributed to it which are not traceable to it, and as a consequence mistakes follow.

A woman arriving at fifty flows through a whole month, and on consulting her doctor is told she is at the change of life. She complains of pain and a profuse watery discharge, and he reports the same diagnosis. Another physician discovers that she has cancer of the cervix.

A woman seeks the opinion of her friend and physician on account of abdominal enlargement, and she is told it means nothing; and the adage—"fat, fair and forty"—is quoted for her satisfaction, while a more careful practitioner discovers an ovarian cyst.

In referring to disease developing at this period, he mentions those rare instances of physso-hydro-hæmato and pyo-metria. It occurs when the atrophy of the cervix is more rapid than that of the body of the uterus—the cervical canal becoming closed—thereby retaining the products of secretion of the mucous membrane of the uterus, which is still active; and just prior to this, complete occlusion, air having entered the cavity of the uterus, fermentative changes are induced, and gaseous and liquid distention of the uterus follow.

The rarity of these cases is evident; for T. says, after thirty-eight years' practice, he has met with only three cases. In one case, suspecting hydro-metria, which had been diagnosticated cancer of the uterus—the disease came on ten years after the menopause—and in which a sudden pinkish and offensive gush of fluid had escaped from the uterus, T. forced a sound through the cervical canal, dilated the cervix, curetted the uterus for suspected hydatids, which were not found. An immediate cure followed the introduction of a glass stem through the cervical canal by insuring perfect drainage.

He then refers to two varieties of senile vaginitis—the adhesive and the hæmorrhagic. This affection occurs in both widows and virgins, but is not commonly found in married women, for the reason that vaginal contraction does not develop in them with as much certainty as in the other class. The first form results in atresia of the vagina by adhesive inflammation. Treatment is irrational, and the patient should be let alone.

In ninety and nine cases out of a hundred, when a woman passes blood from the vagina after the menopause, malignant disease will be found somewhere in the genital tract

The exception he notes is that of hæmorrhagic vaginitis, in which the blood oozes from the vaginal mucous membrane. Here the treatment is to separate the walls of the vagina by means of a glass plug, making alterative applications to the parts or packing the vagina with iodoform gauze, and general tonics for restoring her defective hæmatic condition. He also refers to a form of senile hysteria, a result of retrograde metamorphosis of sexual organs, in which the mind is affected and there is melancholia, lasting for years.

The mechanical displacements are also referred to, either from pressure from above, impairing the tone of the uterine ligaments, or traction from below, dragging the uterus downward.

At the menopause one of two things happens: she either grows

fat or lean. When the fatty tissues about the vagina are absorbed, the canal itself drags upon the uterus, resulting in prolapsus.

[Another, though infrequent, condition occurring subsequent to the menopause, and liable to be confounded with malignant disease, is sloughing submucous fibroids. A married lady, about sixty years of age, suffered from a constant bloody and offensive discharge, with recurring attacks of hæmorrhage, coming on about ten years after the menopause. Her health was greatly impaired; there appeared to be a profound cachexia, and the rational symptoms pointed to malignant disease of the body of the uterus. One symptom commonly, though not necessarily, present in the earlier stage of cancer of the uterus, viz., pain, was absent. Shortly after coming under my care, she expelled, one day, a dark mass the size of an English walnut, which was, unfortunately, destroyed. Improvement began at once; the discharge ceased; the cachexia disappeared. This was thirteen years ago; and last fall she was living and well. I believe it was a fibroid.—W. B. C.]

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## DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

Clinical Professor of Dermatology, Long Island College Hospital; Attending Physician, Brooklyn Hospital; Surgeon to Skin and Throat Department, Brooklyn Eye and Ear Hospital.

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### SYPHILIS IN ICELAND.

A letter from Dr. Schierbeck, of Reykjavik, to Dr. E. Lesser in Leipzig, who publishes it in Pick's journal (*Archiv f. Derm. und Syph.*, vol. i., 1891, p. 37), with comments.

He (Dr. L.) as introduction to the letter itself (which we here translate in part), speaks of the professional tradition or superstition as to the immunity of Icelanders, or dwellers in Iceland, to syphilis, which the present letter of Dr. Schierbeck refutes. He (Dr. S.) gives his various reasons for the rarity of this disease in that isle, but claims that it is not alone in this, but that it is also the case with other infectious diseases, such as glanders among horses, etc.,—a disease which, curiously enough, has been by some considered as analogous in horses to syphilis in mankind. Dr. Lesser, for a better clearing up of the question, wrote to Dr. Schierbeck, and propounded the following questions, viz.:

(1) Is there in the present resident population absolutely no case of syphilis?

(2) Is there no record in the chronicles of Iceland, since the end of the fifteenth and beginning of the sixteenth century, of syphilis, or "morbus gallicus"?

Here follows the answer.

*(The translation of letter is given, as far as possible, with non-essentials omitted.—S. S.)*

“REYKJAVIK, May 8, 1890.

“ESTEEMED COLLEAGUE :

“In answer to yours of the 15th of March, to which I am pleased to respond, and to give you my experience of the last eight years as regards syphilis in this island, on which you can build your opinion.

CASES THEN GIVEN.

“(1) Individual, æt. 35. Returned from Denmark in 1884. Mucous patches on anus and scrotum.

“(2) Individual, æt. 28. Five years' residence in Denmark. Had repeated attacks of macular and papular syphilis. Repeated outbreaks of mucous patches on anus and scrotum. Syphilitic alopecia. Was almost three years under my treatment. For the last year no symptoms of any kind have appeared.

“(3) — æt. 27. Six months' residence in England. Induration on dorsum penis. Indolent adenopathy, both inguinal regions. Extensive eruption of macular syphilis on trunk and limbs. The symptoms disappeared under use of 150 mercurial pills. Patient since returned to England.

“(4) Sixty-year-old Icelander. Had made repeated trips to other countries. Had acquired syphilis. A paraplegia, under the use of mercury and mixed treatment, has entirely disappeared.

“(5) Married woman, æt. 35. Had lived a considerable time abroad. As far as could be judged the syphilis was not congenital. Suffered with obscure nervous symptoms for five years, and for five years had no children. About three years since there appeared a periostitis of the hard palate. This entirely disappeared and healed under the use of iod. potass., the nervous symptoms also disappearing. The patient shortly after treatment became gravid, and was delivered of a living child—at the time of writing, about two months old.

“(6) Married man. Childless marriage. Had been abroad six years. Never gave a history of syphilis, but in his youth had been given to excesses, among them venereal. A bad case of general paralysis (dementia paralytica). Death followed in two years after outbreak.

“Now, continues Dr. S., even if in the suspicious cases, Nos. 5 and 6, one must speak with reserve, after all, the four above-mentioned well-marked cases must decide against the immunity of Icelanders to this contagion.”

“These cases, however, all acquired the disease abroad, and it is a fact that I have never seen a case originating here; but I think it can be explained easily how that is so.” The doctor (Dr. S.) then goes on to insist that the thin population just on the coast line and thinly scattered population, with their peculiar habits, are peculiarly unapt to get a contagion of this kind; and then reasons that the importers of this disease may be put under two classes: the natives and foreigners. That the first named belong to the “upper society” class; that the others have no means to travel further. To a man of the first class coming home to Iceland, his first care is to keep his disease as secret as he may, and never dares to think of marriage till a goodly number of years are gone by.

In regard to the second or stranger class, he says there are neither brothels or, he believes, prostitutes for gain in Iceland; and he thinks it highly improbable that there is ever any or much intercourse carried on by foreigners and native women. Habits, etc., do not give sufficient opportunity. If a brothel were allowed, he would believe it might lead, in this exceptional land, to the spread of syphilis; although elsewhere he believes well-ordered and watched brothels protect the community. He believes it is in the chapter of probabilities for an epidemic of syphilis to break out any time in Iceland, especially since the return of emigrants from America, either as visitors or for permanent abode. Twelve such individuals had recently returned from the United States.

Dr. S. further says, in answer to the second question:

“I have carefully looked up the annals of the times mentioned, but can find nothing corresponding to the word syphilis, morbus gallicus, etc.; but it is always possible, and perhaps to be expected, that it should have another peculiar term here.” In the annals about this time there occurs a word ‘pletsot,’ which deserves attention, but exact equivalents of which he cannot explain.

He asks Dr. L. to excuse him for not giving him some statistics of other diseases in the island, and says in respect to tuberculosis (which is also believed never to occur in Iceland), he has seen one case, a man, who, about three years ago, had returned after a protracted residence in Copenhagen, with decided phthisical symptoms.

BACTERIOLOGY.

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BY B. MEADE BOLTON, M. D.,

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CORROSIVE SUBLIMATE AS A DISINFECTANT AGAINST THE STAPHYLOCOCCUS  
PYOGENES AUREUS.

A. C. Abbott (Johns Hopkins Hospital Bulletin, No. 12, April, 1891) publishes the results of test made upon cultures of the staphylococcus pyogenes aureus with a 1 : 1000 solution of corrosive sublimate. Abbott finds that the disinfectant power of corrosive sublimate in the above concentration, when tested by methods which exclude the carrying over of minute quantities of the disinfectant, is not so great as has been claimed. He holds that in many of the experiments heretofore made to test corrosive sublimate, the latter has been assigned a higher rank than it deserves, because some of it has been transferred to the culture medium, and has inhibited, but not destroyed, the growth.

His experiments were made upon liquid cultures containing sterilized sand. With cultures of this sort he was able, by filtration, to get a better distribution of the organisms in the liquid, avoiding macroscopic clumps, which might interfere with the action of the disinfectant upon the organisms in the centre. Suspensions in water were also used—also filtered. Fresh cultures and fresh solutions of corrosive sublimate were used, of course, in every case.

Abbott finds that the number of organisms makes a difference in the efficacy of the disinfectant. The greater the number of organisms the more difficult the disinfection. Cultures vary in their resisting power—organisms from one culture resisting better than those from another. Cultures in beef-tea resist better than suspensions in water. Organisms which remain alive after the action of the disinfectant are retarded in their growth and are weakened in virulence. Corrosive sublimate, in the proportion of 1 : 400,000, retarded growth in cultures of bouillon containing peptone, 1 : 600,000 without peptone. The staphylococci, which have been attenuated by the action of the sublimate, regain their virulence when cultivated for some time on ordinary culture media.



## MEDICAL JURISPRUDENCE.

BY SIDNEY V. LOWELL.

## EXPERTS.

One of the great difficulties about the trial of a case in which expert testimony is depended upon arises from the use of hypothetical questions. A witness is ordinarily examined upon what he knows about the very circumstances that are to be considered in the case: what some one said, what some one did, what another did not say, what another did not do. The examination of such a witness is easily made, because his attention can be directed upon certain definite occurrences, of which he was literally the "witness."

The witness examined as an expert must be examined frequently on another line; he has to be asked questions that are in their nature far removed from the examination of an ordinary witness—not things that he saw, or heard, or was, in any of the ordinary ways, witness to; not even matters that came to him by hearsay.

The expert witness must answer questions in which, instead of being required to give proof of facts, the latter are assumed. Assuming certain things to be true, he is requested from them to draw certain conclusions.

There is frequently, therefore, a great deal of embarrassment, both to the examining counsel and to the witness, owing to the innate difficulty about the examination of an expert witness. No trial ever occurs in which there is not a fierce wrangle over the permissibility of questions addressed to the latter.

The easiest way of laying a foundation for such testimony, in many cases, has been to ask if the witness heard the testimony of such a witness, some one being named who testified concisely as to all the material facts; then to query: "Now, assuming the correctness of that testimony, what would be the necessary consequence" in such and such a way? The Court of Appeals, however, in our McElvaine murder case, recently decided against that line of examination as carried on in that prosecution. The decision may not of necessity prevent the use of such a foundation for the assumption of facts, in asking an opinionative question, but it will be likely, practically, to do away with it. This will undoubtedly increase the difficulties as to expert testimony, by making it harder to draw out.

In the case to which I have interjectively alluded, the matter came up in this way: On the trial of McElvaine for the murder of the grocer Luca, in this city, Dr. Landon Carter Gray, the well-known expert as to diseases of the brain, formerly practicing in this city, was called by District-Attorney Ridgway. A discussion arose as to a question asked him, based upon the testimony taken. Judge Moore, the county judge presiding at the trial, then said: "Where a medical witness, who is called as an expert, has been in court during the whole trial and heard all the testimony in the case, everything that has been done and said by everybody, I don't see why it is not competent to ask him whether, upon those facts, all he heard testified to, he thinks the defendant is sane or insane. The witness has heard all that has been sworn to by everybody." The question was then repeated, allowed, and answered. The doctor said that he thought the prisoner was sane. The Court of Appeals held the question improper and reversed the conviction on that account. He might not have heard the testimony; if he did, he might not have recollected it, Chief Judge Ruger says, in the opinion of the court, giving their reasons for reversing the conviction.

I notice also two recent cases in the Supreme Court in the City of New York, bearing on medical expert testimony. John O'Brien sued the New York, New Haven and Hartford Railroad Company for injuries received on the latter's railroad. One of the physicians, called for the plaintiff, was asked this question: "From your knowledge of the case, from your examination of the wounds when they were comparatively fresh, and your knowledge of the case generally, are you able to state to this jury what, in your opinion, will be the probable effects of these wounds upon the future health of the plaintiff?" This question was allowed at the trial. On the appeal, lately heard, the verdict which the plaintiff had recovered was set aside because of the admission of that question.

A similar question: "Tell the jury what results are likely to flow from the injuries from which Mrs. Atkins was suffering on the 3d of January, 1888," had been allowed in a previous case, tried not long before, and the appellate court had set aside a verdict recovered because of its admission. That decision was cited, approved and followed.

It seems to the writer that the tendency of the courts of late has been to narrow the line of the examination of expert witnesses too severely. It is impossible to adjudicate correctly upon very many cases without their services. To make their examination difficult and risky leads to the setting aside of verdicts to which the suc-

cessful party, on the merits of the case, is usually entitled. All the expert cases to which my attention has been directed, recently decided, making fresh limitations on the method of the examination of experts, have been actions in which the prevailing party, apparently, had a good cause of action, and no substantial harm had resulted from the allowance of the questions to the experts, afterward ruled by the appellate courts to have been incompetent, and because of which hard-won verdicts have been set aside.

The office of cross-examination is so large, that it would seem as if it could be, as a rule, depended upon, after the witness has been examined in chief, according to the older methods, to draw out what the expert witness based his opinion upon and the nature of the results he anticipates.

The other case I have referred to arose on the trial of Charles Webster for the killing of Robert McNeill. The defence was that of insanity. In that case the medical expert, called for the people, being examined on the question as to whether non-expert witnesses, in giving an account of a person's actions, which they are describing as insane, "do not almost always exaggerate," was allowed to so testify. The conviction for manslaughter obtained at the trial was set aside, partly on the ground of the reception of such testimony, it being held that it was for the jury to consider and answer, as it were, that question, rather than the witness. I think no proper criticism can be made on that decision. The trial judge (Cowing) had taken occasion also to reflect on medical experts in general, saying that one had been called by each side to support the theory of each; and he added: "I have tried a great many homicide cases, and other cases, in which doctors have been called as witnesses, and it is the most remarkable circumstance that you can always obtain an equal number, as a rule, to swear on both sides of any question."

The appellate court, through Judges Daniels, Van Brunt and Brady, on account also of these observations, set aside the conviction, and ordered a new trial. They thought the trial judge had no right to import his so-called experience as to experts into the case.

The writer has had to use a great deal of expert testimony in his practice of the law, and thoroughly appreciates the advantage of the rule which allows skilled and scientific men to throw light upon questions which otherwise would remain dark, and also deprecates any wholesale condemnation of such expert witnesses.

## MISCELLANEOUS.

### ON RESCUING DROWNING PERSONS.

The following directions to swimmers for rescuing drowning persons are given by Herr Tetens, President of the Seaman's Society in Hamburg :

1. When you approach a drowning person, call to him in a loud voice that he shall be saved.

2. Before springing into the water, undress as completely and as rapidly as possible. Tear the clothes off if necessary ; at any rate, loosen the drawers below if they are bound about the ankles, else they fill with water and hold back the swimmer.

3. Do not touch the drowning person so long as he still struggles strongly in the water ; wait a few seconds until he becomes quiet. It is foolhardiness to touch any one while he struggles with the waves, and he who does this subjects himself to much danger.

4. When the unfortunate is still, seize him by the hair of the head ; throw him as quickly as possible upon his back, and give him a push to hold him up. Then throw yourself upon your own back and swim thus for land, meanwhile holding with both hands the drowning person by the hair—of course, with face upward and his head resting upon your own body. In this way one reaches land more quickly and surely, and a skilful swimmer may even keep two or three persons above water. A great advantage of this expedient is that the rescuer is in the most favorable position for keeping his own head as well as that of the unfortunate above water. One can also remain in this position a long while, which is of importance when obliged to wait for a boat.

5. The "death-grip," practically, is a thing of rare occurrence. As soon as a person becomes weak and begins to lose his senses, his grip becomes weaker, and his hand at last completely loses its hold. He, therefore, who has an idea of saving a person by swimming, need have no fear of the "death-grip."

6. If the person has sunk before he could be reached, the location of the body will be very accurately indicated by the bubbles which rise to the surface now and then. In flowing water which prevents the perpendicular rising of bubbles, allowance must of course be made for the direction and the rapidity of the current.

7. In diving after a body, it should be seized by the hair with only one hand, while the other hand and the feet are used in regaining the surface.

8. In salt water when the current sets from the land, as when the tide is going out, it is a mistake to struggle to reach land. One should rather throw himself upon his back, whether alone or encumbered, and await help from the shore. Many persons perish by exhausting themselves in vain attempts at swimming against the current, when they might have thrown themselves upon their back and awaited help from shore.

9. These rules are applicable in all cases, whether in still water or in the roughest sea.—*Schweiz. Blatter f. Gesundh.*









THOMAS BARTHOLINVS, CASP. FIL. D.  
 MED. ET ANATOM. IN ACADEM. HAVNIENSI  
 PROFESS. REGIUS. *Ætatis* 39. A<sup>o</sup> 1655.

*Carl. von Meüder  
 pinxit.*

*Jacob van Meurs  
 sculpsit.*

The eminent Swedish anatomist, physician and mathematician, was born in Copenhagen in 1619. After some years study in his own country, he spent two years in the study of physic under the celebrated teachers at the university at Leyden, after which he resided two years at Montpellier and Paris, in order to further improve himself under the famous physicians of those two universities. He went from thence to Italy, and continued three years in Padua, where he was treated with great honor and respect and made a member of the Incogniti. He received his doctor's degree at Basel in 1645.

The year following he returned to his own country, where he succeeded the celebrated astronomer Longomontanus as professor of mathematics at Copenhagen.

In 1648 he became professor of anatomy—an employment more suited to his genius and inclination—which he discharged with great assiduity for thirteen years.

It was during this period that he made his minute researches on the glands, the ducts and lac-teals with which his name has been ever since associated, though Olaus Rudbeck probably deserves the credit of priority in the discovery of the intestinal lymphatics. He also threw considerable light on the structure of the lungs and heart.

His intense application having rendered his constitution very infirm, he resigned his chair in 1661, and the king of Denmark allowed him the title of honorary professor.

He retired to an estate near Copenhagen, where he intended to spend the remainder of his days in tranquillity; but his peaceful retreat was disturbed by a fire which destroyed his home, together with his library and manuscripts. In consideration of this loss, the king appointed him his physician at a handsome salary and exempted his land from taxation. The University of Copenhagen, likewise touched with his misfortune, appointed him librarian; and in 1675 the king honored him still further by giving him a seat in the grand council of Denmark.

He died in 1680, and left several works.





little relation to therapeutics, although the diseases producing certain of the conditions may be treated with benefit. To the patient their importance consists in the prognosis which may be given in the individual case. It is a well-recognized fact that the state of the nervous system—hyperactivity or depression, showing itself in neurasthenic conditions—has a controlling influence over the action of the heart. Anxiety and constant worry about bodily conditions may have a depressing influence upon the health. Giving undue importance to the presence of abnormal cardiac sounds may affect the prognosis in the case, and in itself cause harmful results.

The reason that these peculiar sounds may be misinterpreted, after their due recognition, is, that in the study of heart cases only one method of physical examination is very frequently used. Upon the findings of that method the diagnosis is made. The other means of examination are either not used at all or are given a secondary place. The notes of recorded histories of heart cases that are frequently met with in studying the literature of cardiac disease, bear strong testimony to this fact. It is common in the examination of the case that the ear or the stethoscope is at once applied to the area of the apex. Perhaps a loud, roaring sound is heard there, transmitted or not. Very little importance is given to the basic sounds, because something definite and striking has been found at the apex. This is at once called mitral regurgitation, and the patient is put down as a chronic organic heart case. In a large number of cases such a conclusion would be absolutely incorrect. I have made from my series of heart examinations in the last three years a list of all cases in which there was an apical murmur, systolic. Then I have ascertained the diagnosis in each case. Of this number, thirty-six per cent. were cases in which there was no inflammatory valvular disease. In other words, sixty-four per cent. were cases of mitral regurgitation.

The interpretation of the sound should come after its recognition, and this can be done only by employing all of the methods of physical examination of the heart. A systematic course of examination should be pursued. Were I to name these methods in order of importance—*i. e.*, giving precedence to those by which we find the most of the condition of the organ—I would say that first came palpation, next inspection, next the associated percussion and mensuration, and then auscultation. The last tells of a condition. The others tell what that condition means, and they with the pulse will frequently make the diagnosis.

If our illustrative case had been one of mitral regurgitation, the entire diagnosis would have depended upon right ventricular hypertrophy. Muscular change in the heart can always be diagnosed by the first methods of examination, whether it be from inflammation of its own structures, or from disease in organs far removed. These methods would have discovered, in this case, *five* signs, all resulting from and all pointing to a certain condition, giving positive testimony that there was no change in the left ventricle. Upon auscultation *three* more signs (not including the apical murmur) would have been found, making with the pulse *nine* in all, the murmur giving merely additional testimony, but its presence alone would never mean organic valvular affection. As shown by the percentages given above, auscultation alone would have placed in the same category cases resulting from endocardial change, and cases in which no such grave disease had been present.

The study of the sounds here presented has been upon the clinical examination of cases and upon observations of the cardiac area in post-mortem examinations. The combination of these two has resulted in a series of theories, some of which are still theoretical, while others have been proved in the dead-house.

#### I. THE POST-MORTEM EXAMINATIONS.

It should here be noted that in the examination of heart cases there is only one important area of cardiac dulness. This is the superficial area. It is in shape an irregular triangle, about two inches in each direction, extending from the apex to the left para-sternal line, up the left para-sternal line to the fourth cartilage, and then curving out from that point to the apex. The deep area of dulness, for the finding of which so many rules are given in the books, need never be ascertained in heart examinations. It is of no value.

The first point in making a series of post-mortem examinations (for cardiac conditions) was the appearance of the external surface of the pericardium, *in relation merely to the aspect of its extent*. Two conditions were noted: The membrane *smooth* and the membrane *wrinkled*. The extent of this area in the dead body, in some cases, was similar to that in the living subject. In other cases it had no particular shape and no particular dimensions. The ordinary expansion of the chest wall upon opening the thorax is one factor in the production of the change. But such change would affect merely the size. Judging from the continued results obtained, the condition of the normal area (such as is found upon

clinical examination, is seldom changed. Should there be no alteration in adjacent organs, no adhesions, or adhesions equal in amount on both sides, the pericardial surface will be *smooth*. It will be *wrinkled* either by pressure or by traction. The *pressure* may come from an excess of blood in the middle and lower right lobes, an enlarged liver, a distended stomach, pleuritic adhesions on the right side, emphysema of the anterior margin of the lungs. The *traction* may come from a distended left lung, pleuritic and pericardial adhesions, excessive amount of connective tissue in any part. It has been of interest to observe that enlargement of the left abdominal organs has produced no change; also that excess of blood in the lower left lung tends to draw that organ away from the heart and not toward it, as on the right side. The presence of the liver on the right side giving greater space for movement on the left accounts for this. Next the condition of internal pericardium was noted; then the cardiac muscle, searching for a "white patch." This was most generally found on the anterior portion of the right ventricle and not so frequently over the conus. The condition of the tissue about the heart is examined, and then the position of the pulmonary artery. In some cases, as Gray says, the vessel went obliquely upward, backward, and to the left, but in others it was found to go straight up and to lie very close to the aorta. Its size must be ascertained, and also any peculiarity at the point of division. Pleuritic adhesions of all kinds and emphysematous patches must be searched for.

## II. THE CLINICAL EXAMINATION.

Five elements have entered into the study of these sounds:

1. The time.
2. The position.
3. The character.
4. The influence of rest and action.
5. The individuality.

The principal rules for the interpretation of the sounds have been two in number:

1. The presence or absence of muscular hypertrophy.
2. The individuality of the sound.

This latter is most important. It bears the same relation to cardiac disease as the individuality of the pleuritic friction sound bears to pulmonary disease. In addition to the rubbing friction sound is heard far away, remote but distinct, the vesicular murmur. So in these cases, with one exception, the murmurs bear no

relation to the cardiac sounds, first and second. They are heard in addition to them, not taking their place.

The cases have been in hospital, dispensary, and private practice. They represent, therefore, all classes of society.

In this paper the terms murmur and sound are used interchangeably. Dr. Gee has defined a murmur as a sound produced by the flow of fluid, liquid or gaseous, along a tube. All murmurs are therefore sounds. Although the reverse statement is not true, yet there are many sounds that have a murmurish character. Certain of these peculiar cardiac conditions are typical murmurs, as they are produced by a fluid vein. Others have merely the elements of sound with varying degrees of pitch and intensity.

The murmur of anæmia is here merely mentioned. It does not wholly belong to this category, as there is often dilatation of the ventricles, but still in some cases it is non-valvular.

A term has been used to embrace all these murmurs, which has certain exceptions to be noted.

Mention will be made without description of sounds about the heart, resulting from well-marked disease in other organs.

With these explanations, therefore, there are certain abnormal sounds produced by cardiac action. Nine of these are here considered.

#### I. OF ANÆMIA.

Reference is made to a paper\* read in this place some time since on an analysis of one hundred cases of the above disease, which contained a description of the murmurs found in thirty-one cases of that series, with a discussion as to their causation. The following words are quoted here: "A soft blowing murmur; in point of time systolic; never taking the place of the valvular sounds; most frequently a continuous murmur, occupying the whole of cardiac action, intervals between the cardiac sounds and the murmur being rare; made more intense by exertion; not always disappearing when in the recumbent position.

#### 2. OF RAPID ACTION.

Occasionally during the first part of an examination of the heart, where the action is rapid, a faint, left apical, systolic murmur may be heard. During the latter part of the examination this murmur may disappear. The general nervousness of the patient is always

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\* An Analysis of One Hundred Cases of Anæmia, by Henry Conkling, M.D., read before the Kings County Medical Society, December, 1888; published in THE BROOKLYN MEDICAL JOURNAL, March, 1889.

very apparent. Temporary nervous activity causes the murmur. Upon holding the breath it becomes progressively fainter and then disappears. It is not heard in the recumbent position. Upon having the patients violently move the arms, and so increasing cardiac action, it was noted that the *pitch of the murmur was raised, but that the intensity was not changed*, contrary to usual rules. In no case was there a history of nicotine poisoning. Only once was the murmur heard in a child. The highest pulse was 150; the lowest 112. In seeking for the ætiology of this murmur, the question arises, was there reduplication of the first sound, the mitral and tricuspid valves closing at different times? This was excluded, as such reduplication is generally considered as leading to a præ systolic sound. The explanation may perhaps be found in recalling the formation of the mitral valves. Their edges are slightly uneven, but so adapted to one another that coaptation is perfect. In this series of post-mortems the tube test has been used to note the competency of the mitral valves, a long glass tube three-quarters of an inch in diameter being passed through the aorta into the left ventricular cavity, below and behind the anterior mitral valve. The valves were then blown up, similar to being floated up by the blood in the active heart. It is not always possible, when imitating rapid action, to bring about perfect closure on account of the uneven edges. It is not improbable, therefore that, in rapid action, in certain cases, where the valves are coming frequently together, time is not allowed for perfect closure, causing a mitral regurgitation, there being of course no incompetency. The fact, already mentioned, that exertion in the cases examined raised the pitch but did not affect the intensity, strengthens this view.

In studying these cases another question arose—Why is not such a murmur heard in the rapid heart of disease—for instance commencing febrile affections? After examining a number of such hearts, two answers can be given:

1. The recumbent position.

2. Because in inflammatory conditions, where the heart muscle at the commencement of the disease is normal, there is present a pulse, the description of which may be given in three words which have become classical: full, hard, bounding. The activity of the arteries is increased. Their greater contracting power carries away from the heart with perfect ease the extra blood thrown into them. In the form of rapid action first described these arterial conditions are absent and a murmur results.

## 3. OF DISTURBANCES OF RHYTHM.

In a few cases murmurs were heard in patients suffering from severe stomachic disorders, the urinary organs being normal. As the conditions improved the murmurs disappeared. In one case it was a typical præ systolic sound occurring toward the end of diastole.

The ætiology of the sounds in these cases is very obscure. I have thought that the fact that motor fibres from the pneumogastric went to both heart and stomach might be an explanation.

## 4. OF THE ROUGHENED AORTA.

This is almost invariably a double murmur, having a late systolic and an early diastolic element. Sometimes the systolic portion may be heard in the neck; the diastolic portion never. The second aortic sound is clear and distinct, or weak, depending on the condition of the muscular fibre. The murmur is high pitched, harsh, blowing, distinct in varying degrees. In one case it was heard at the apex and up and down the sternum. In the majority of the others it was limited to the aortic area. In many of the cases there was a syphilitic history, which would account for weakening of the muscular tissue. The roughening which causes the murmur in this peculiar state may be said to be atheroma, using the word only in the most strict sense of its meaning in the original, and not discussing in detail causations. The growth must be in excess of the basic foundation, which is its commencement and beyond which it sometimes does not go. In other words, *elevation must be present* or no murmur results, as both clinical examinations and post-mortem observations have shown. Atheromatous changes without elevation were found in cases where the heart was examined before death and no murmur discovered. The appearances found were: A single patch, numerous small patches arranged in a circle, with staining of the vessel between them, a long line, and well-marked points. The condition being an early one, need not be associated with dilated aorta, and marked constriction is not always present when there is syphilis. Hypertrophy of the heart never exists in these cases. While this is the most grave of the conditions presented here, it is the simplest in its nature and illustrates perfectly the usual causation of murmurs. From the study of these cases it seems apparent that this atheromatous patch must be in the aorta, away from and not in the immediate vicinity of the aortic valves, and the reasons for so saying are two: 1. Theoretically. 2. The result of a post-mortem examination.

## I. THE THEORY.

Many years ago Cheveau stated that in valvular disease of the heart the murmurs found were due to a fluid vein, by which eddies were formed. He defined a fluid vein as a jet of fluid flowing swiftly enough out of a narrowed orifice into a wider space. It is of great service in the study of pulmonary diseases to widen the definition and apply his principles to columns of air. For our purposes here a simple experiment was performed. One end of a rubber tube, sixteen inches long and one-half inch in diameter, was placed in the mouth, and a current of air blown through. There was heard a low pitched sound. Pressure was made on the tube at some part of its length, causing a narrowing of the calibre. The pitch of the air current was immediately raised, a change from the first or normal sound. There had resulted a fluid vein. The mouth was the left ventricle; the tube was the aorta; the constriction was the narrowed orifice, and the wider space, *i.e.*, wider than the constriction, was the tube beyond. But it was found that the position of the constriction had a great influence on the sound produced. If the lips and teeth produced it, no change occurred in the pitch, because no fluid vein had been produced, there resulting merely a smaller tube at the commencement, which lessened the amount of the air current but offered no interruption to its progress. It was necessary, therefore, for the constriction to be away from the mouth.

## 2. THE POST-MORTEM.

In December, 1890, a woman, aged fifty-six years, was admitted to St. Peter's Hospital with abdominal ascites. The examination of the heart revealed no change except that the sounds were very clear, even forcible. Its action seemed to be that of a heart working very energetically in a cramped position, due to pressure from below. Advanced hepatic cirrhosis caused the patient's death. The post-mortem examination showed that a mistake had been made as to the true condition of the heart. There was great thickening of the aortic valves and their attachment, explaining the accentuated sound. Near the heart the aorta was smooth; well down in the vessel it was roughened. But between the middle and right cusps there was an atheromatous elevation, firm, solid, intact. When the valves were open, its summit was on a level with the orifice, between two of the cusps. When they were shut, its base was close to the circular valvular attachment, being of necessity placed low down at the bottom of the sulcus which is immediately behind the valves. No murmur



had been heard in this case, because, when the ventricle contracted, no obstruction had been offered to the size of the blood current, and because, when the recoil came, so close was the growth to the valves that the blood could not eddy around it. In the roughened aorta, therefore, the growth must be away from the valves, near enough, however, to receive the direct force of the blood current. In this condition there exist the aorta on one side, the constriction (the growth), and the wider space (the aorta beyond). This is a typical fluid vein. The systolic portion of the murmur comes from left ventricular contraction; the diastolic portion comes from the aortic recoil. To this condition in my notebook I have given the name of *extra-valvular vascular*—outside of the valves in the great vessel.

#### 5. OF THE DILATED PULMONARY ARTERY.

The following is an illustrative case: A systolic murmur heard in the region of the pulmonary valves, at the left para-sternal line (fifth and sixth cartilages) at the apex and faintly in the back, being of high pitch at all points except the apex, where it was of low pitch, in a man forty-four years of age, with great muscular development and a chest expansion of five and one-half inches, who since the age of nineteen had been accustomed to violent gymnasium exercises, such as demanded great exertion, as swinging upon the parallel bars with the body nearly horizontal with heavy weights attached to the feet, and who was accustomed at the time of the examination to run long distances daily. There was no increase in the size of the heart. The sounds were all present, but not accentuated. The murmur was regarded as coming from dilation of the pulmonary artery, for eight reasons. 1. It was late systolic. 2. Its maximum intensity was at the base of the heart. 3. There was no accentuation of the pulmonary second sound. 4. Its duration was short. 5. Its cessation was quick. 6. It had the element of directness (as though produced in a small space). 7. The important history. 8. The absence of all symptoms. This man was an athlete who daily during his exercise had produced an overdistention of the circulation in the lungs, a damming back upon the pulmonary artery and the right heart. Muscular strength was greater than vascular strength, and the vessels yielded. This murmur bears no relation to one coming from the dilatation of the pulmonary arterial branches. It is found only in athletes, runners, oarsmen, etc., because they demand instantly and for a relatively short continuance increased exertion. In the intervals there is no extra demand. In hundreds of examinations

of the heart in laboring men, especially longshoremen and porters, I found no dilatation of the pulmonary artery, because their work is more moderate, does not tax the right heart as much, is continued longer *continuously*, and produces from its nature different chronic changes.

In other cases of the dilated pulmonary artery pulsation of the vessel was found upon examination. In the first part of the paper attention was called to the position of the pulmonary artery, and its relation to the aorta. In these cases it is possible that eddies may be found in the blood current from too close contact of the vessels during their movement. This would explain at once the murmur sometimes heard in the back.

#### 6. OF THE PULMONARY ARTERIAL BRANCHES.

The following cases illustrate this sound: There was heard a soft, breezy, systolic murmur over the greater part of the cardiac area and upon the mammary regions on both sides. It did not come with every cardiac beat, but still was regular in its occurrence. In the recumbent position it became fainter. The person examined was a locomotive fireman, who was constantly "firing the engine." Similar sounds were found in longshoremen, laborers, and porters. Their work requires frequent, repeated, long inspirations, and also holding the breath. Consequently distention of the alveoli occur. This is attended by a temporary stagnation of blood, with neither diminution nor increase in amount, in the pulmonary arterial branches. A deep *expiration* occurs, and the sudden release of the blood in the vessels causes irregular pulsations, giving rise to the sound. The constancy of the work probably causes some organic change which becomes chronic; in other words a habit is formed; by this habit, what at first was only heard at times, becomes chronically present.

#### 7. OF PERICARDIAL FRICTION.

Ten cases are reported. The murmur is generally, but not always, limited; heard at the right apex, left apex, or anywhere where the right ventricle comes against the chest wall. It is grating, harsh, hard, and may be systolic or diastolic; if diastolic, it comes from the rebound of the heart.

Pericardial friction sound has been described for many years. The impingement of the conus arteriosus against the chest wall has been said to be the cause. My own experience has been almost invariably to limit the sound produced by the conus arteriosus to cases of organic valvular disease, finding a friction

sound in addition to the murmurs or murmur, and upon post-mortem examination finding the so-called "white patch" upon the conus. But in this series of post-mortems the white patch has been found more commonly over the lower portion of the right ventricle. A friction sound could of course result from it in that position.

To this view are here added two observations. 1. The recorded notes of these cases say that there was found occasionally a general systolic murmur, which in some cases had a soft, wavy character. If this be so, it is possible that the pericardium was *wrinkled*, due to the causes already mentioned, and by the pulsations of the heart these folds were being constantly brought in contact, causing a sound. In a case but recently examined of enlarged liver there was heard an apical murmur, which was non-valvular. Hepatic enlargement has been mentioned as one of the causes of *wrinkling of the pericardium*. This case was a perfect illustration of such a condition. All other causes could be excluded. 2. Sometimes a systolic murmur is heard at the apex in dying patients. In a post-mortem made recently, the results of which are in keeping with others, acute pericarditis was found with bands of lymph, well formed, running from heart to pericardium. A murmur was heard in this case before death. It is not impossible that the movement of such bands caused the sound.

#### 8. OF EMPHYSEMA.

In no case of general emphysema was a non-valvular murmur heard, but there were a few cases in which the area of cardiac dulness was diminished, where a systolic murmur was heard, generally a little above the apex. It is probably due to an emphysematous patch along the anterior margin of the lungs. Why this localized emphysema should be produced is not always apparent. It may perhaps belong to the class which Strümpell has demonstrated as "vicarious emphysema." It is interesting to observe that here the condition is also one of a fluid vein. There exist distended alveoli, slow and imperfect emptying of air (with a tendency for some to remain), upheaving of the heart, driving the air out in regular and successive beats; all of which make the cavity, the orifice, and the wider space beyond, *i. e.*, the steadily increasing air tubes. The sound disappears in the recumbent position and *immediately upon deep inspiration and holding the breath*. Holding the breath without deep inspiration will cause the sound to become progressively fainter before disappearing. In a few cases an emphysematous crackle from the

beating of the heart against the stretched pulmonary tissue was heard. A few of this last variety were in cases of pulmonary tuberculosis.

#### 9. OF THE PLEURITIC CLICK.

In only one case was this heard at or near the apex. It is a friction sound in the pleura caused by the cardiac pulsation. In this particular case the pleurisy near the heart was the inner end of a long band of dry pleurisy, the outer end of which was at the posterior border of the axillary space.

But far more important than this is another sound which may be pleuritic in character. This is the general systolic murmur. This has already been mentioned and will again be referred to. In studying it clinically, the question arises, could it be pleuritic? With this causation, three conditions would be necessary :

1. Thickened or adherent pleura.
2. A space for movement.
3. A moving body.

Post-mortem observations, upon the positions of the lobes (more especially the right) and the condition of the pleura in the sulci between them, found, with certain anatomical facts, the three necessary conditions, showing that the theory might exist clinically. Adhesions in the sulci, not causing union between the lobes, are common without any great diseased conditions. They may be at the bottom, in the centre, or a simple band at the top going from side to side between the lobes. The middle and lower right lobes were frequently thus found. If the adhesions be at the inner end of the sulcus, cardiac or vascular pulsation may cause a murmurish sound by movement of the bands.

There were found in a few cases of cardiac irritability, associated with deficient excretion of urea, abnormal sounds. Vascular murmurs are very common in pulmonary tuberculosis, either from destruction of lung tissue exposing the pulmonary artery, or as pointed out by Dr. Douglas Powell, from twists in the aorta, due to the development of fibroid tissue. These sounds are not permanent, however, coming and going with the progress of the disease. A few cases were examined where changed conditions in some part of the boundaries of the thoracic cavity produced abnormal sounds, the location of which depended upon the portion affected, and the result upon the position of the internal parts.

In reviewing these sounds attention is called to the *general systolic or diastolic murmur*. By that I mean a sound heard all over the cardiac area, and often beyond the limit of that space

over the surrounding pulmonary regions. The murmur is frequently discovered by accident. The person being examined gives no evidence of cardiac disease. The first means of examination show there is no muscular change. But the murmurish sound is there. What may be its cause? In certain cases it can be definitely stated. In others it is difficult to find. Each case must be studied by itself. A selection may be made by further analyzing the nine sounds already described. The murmur may be from :

1. Dilatation of the Pulmonary Artery.
2. Dilatation of the Pulmonary Arterial Branches.
3. Wrinkling of the Pericardium.
4. Emphysema.
5. Adhesions in the Sulci.

The diagnoses of these sounds are made by what is found and by what is not found. The individuality of the sounds must always be recollected. The sphygmograph gives most certain and positive results; for, while it will not tell of the nature of the condition, it will tell what the condition is not. It is of the greatest value in the roughened aorta, where double aortic disease is simulated, for the needle shows that there is neither valvular stenosis nor regurgitation, and the sphygmograph never fails to diagnose aortic regurgitation, alone or with other lesion, always giving the typical tracing belonging to the pulse of "unfilled arteries."

The therapeutics, when treatment is necessary, consist in giving rest where there has been strain; improving nutrition and breaking up adhesions by the systematic use of oxygen. The roughened aorta and the conditions associated with it may be treated by the iodide of potash. A combination of ergot and the iodide gave most satisfactory results in many of these cases.

In conclusion, the methods followed in this series of heart examinations are again emphasized: To recollect that *auscultation* must be given a secondary place; that from *inspection* may be learned the shape and movements of the cardiac area, the recession and advancement of the apex beat, the impulse of ventricle and auricle; that *palpation* shows the strength, rapidity, and extent of the impulse, diastolic movements, abnormal pulsations, and thrills; that *percussion and mensuration* show the area of dulness; that increase of dulness in the direction of the long axis of the heart means hypertrophy of the left ventricle and points to aortic disease; that increase of dulness transversely means right ventricular hypertrophy and points to mitral disease.

By this method we anticipate auscultation, and by so doing will place in our note-books two classes of heart cases, where there are murmurs : on the one side will be those resulting from inflammatory valvular disease, with all its subsequent changes ; on the other, those presenting conditions similar to what has been described to-night, the most important of which is the extra-valvular vascular.

#### DISCUSSION.

Dr. DICKINSON.—It is scarcely competent for a man who is not a specialist to venture to discuss so scientific and thorough a paper, but as laying added stress on the importance of such a subject, I would like to present the results of some recent examinations.

The commonness of murmurs in men supposed to be healthy has been a great surprise to me during the last three years of civil service examination. The examinations held for firemen, in which about 1,400 have appeared, are known to be rigid, and we only get men who think themselves perfectly sound and well ; men who have been examined before they come to us by some other physician. During the last examination I have laid special stress on that matter, examining each man in various postures, and after exertion, as well as while quiet on his back. The subjects are teamsters, expressmen, longshoremen and laborers, remarkably muscular and well-developed men. Among these men I have been able to find or develop cardiac murmurs in twenty per cent. In ten per cent. organic lesions were found valvular disease. The functional murmur in such active, hard-working men, which has been most common, has been developed by exertion—violent swinging of the arms above the head—and has been usually a systolic murmur at the apex, carried a few inches toward the left of it, occurring at the end of inspiration, and disappearing when the breath is held. A murmur over the pulmonary valves, systolic, and occurring during inspiration, is almost as frequent and very often accompanies the apex murmur.

## LITHOPÆDION.

BY E. H. WILSON, M. D.

Visiting Physician and Pathologist to St. Catharine's Hospital.

Read before the Brooklyn Pathological Society, March 19, 1891.

I desire to present a calcified foetus which had remained for over thirty years in the abdominal cavity. I present the specimen more because of its intrinsic value than because the history has a direct bearing upon it.

The history of this case is as follows :

Margaretha K., 66 years of age, a native of Bavaria, a widow ; five feet four inches, weight 290 pounds. Admitted to St. Catharine's Hospital on the 21st of February, 1891. She was cyanotic, œdematous, suffering from dyspnœa, and her urine contained a large quantity of casts and albumen.

A solid tumor was made out in the abdomen, but attention was called mainly to her most urgent symptoms, which were evidently those of Bright's disease and uræmia.

Subsequent inquiry elicited the facts that she had given birth to three children normally, but that thirty years ago, while in the eighth month of the fourth pregnancy she had pains resembling labor pains ; that she made ready for the birth of the child ; that after a few days the pains subsided and no child was born. The physician in attendance told her that she had an unborn child in the abdominal cavity ; and ever since that she had noticed the tumor and experienced a sense of weight in the region.

She only lived about forty-eight hours after her admission to the hospital, and died on the 23d. Autopsy February 24th.

Body.—Extremely obese ; rigor mortis present ; lower extremities greatly œdematous.

Head.—Not examined.

Thorax.—Lungs : both lungs œdematous, otherwise normal.

Heart.—No effusion in the pericardial sac. Heart hypertrophied. Fatty degeneration and atheroma of root of the aorta : aortic valves atheromatous ; orifice stenosed.

Abdomen.—Stomach and intestines normal.

Large quantities of omental fat.

Liver : Large, cirrhotic and fatty. Some evidences of old perihepatitis.

Kidneys : Large, capsules not adherent, cortices normal, markings fairly distinct.

Spleen : Normal.

The abdominal wall on its ant. peritoneal surface, about the region of the umbilicus, presented a calcified plate about one inch in diameter.

Uterus : Small, normal.

Tubes : Normal.

Ovaries : Right ovary normal ; left presented a dermoid cyst the size of a pigeon's egg, consisting of a fibrous shell, nodular on its surface and containing a greasy, yellow, fatty material and a small quantity of hair.

In front of, and above the uterus, with its long axis lying transversely in the abdominal cavity, was an oblong body, enclosed in a sac composed of organized fibrous adhesions and thickened peritoneum ; the sac was adherent in front to the calcified plate on the abdominal wall and above to the omentum and transverse colon. The hand could be passed around the tumor on either side and below.

Upon removing the body from the sac, it was found to be a foetus, about eight inches long, seventeen inches in its short circumference and twenty inches in its long circumference, and weighed four pounds two ounces, the outer portions of which were calcified.

The form of the foetus can be distinctly made out. The head is flexed on the thorax, the thighs upon the trunk, and one leg, the left, has become dislocated and remains attached to the main mass by a fibrous band. In this leg, the foot and toes can be plainly seen. The sex of the child cannot be made out.

The literature of this subject is not very abundant. I find that in the library of the Surgeon-General's office at Washington reference is made to 37 cases, the oldest dating back to 1586 and mentioned by *Albosius*. From that time to the present the cases have been rather mentioned as curiosities than described. I can find the descriptions of but 12 cases, and perhaps it may be interesting in this connection to quote them.

Dr. *Fales*, of Boston, has made a careful review of these in the fifth volume of *Wood's Monographs*.

CASE I.—Reported by Dr. *Brandt* in the "*Edinburgh Med. Journal*," 1862. Mrs. A., born in 1778 ; married at 17 ; pregnant five times ; had four children. No history of the third pregnancy. Died 1858, aged 80 years. Autopsy revealed a tumor in the abdomen, weighing 1.8 kilos, 20.30 c.m. long, 13.33 c.m. in diameter, 40 c.m. in circumference. It was a bony cyst containing a foetus.



CASE II.—Reported by Dr. Conant in “New York Med. Jour.,” May 10, 1865, pp. 140. Patient in her first pregnancy had normal pains, coming on at the usual time, lasting for a few days and then subsiding. Recovery ensued, attended by a hard tumor in her side, which caused no inconvenience. She subsequently gave birth to three children. In June, 1863, thirty-five years after the accident, she died. Autopsy revealed a calcified foetus, extra-uterine, not encapsulated. Another hard mass was found, which was said to be the uterus, as it contained the remains of a placenta.

CASE III.—Reported by Dr. Parkhurst in the “Medical Times and Gazette,” vol. i., No. 72, pp. 665. Patient became pregnant in 1802. Foetal movements appeared at the usual time. Premature labor was induced at eight and one-half months as the result of a fright. Pains subsided, and for two or three weeks she was comfortable. She then became an invalid for one year, suffering from occasional abdominal pains, after which she regained her health. She died in 1852 at the age of 77.

Autopsy revealed a tumor the external surface of which was smooth and white and composed of fibro-cartilage. Weight 3.6 kilos. No connection with the tubes or omentum.

CASE VI.—Reported by Hans Chiari, “Wiener medicinische Presse,” vol. xvii., No. 38, p. 1,092. Symptoms of pregnancy in 1827. No birth followed them. Patient died at 82 of pneumonia. Autopsy disclosed a tumor attached to the wall of the uterus. Foetal conformity well preserved, all the organs being readily made out.

CASE V.—Reported by Dr. Galli in “Lo Sperimentale.” Two children born. Third pregnancy at the age of 30. Foetal movements ceased after the eighth month. No birth followed. Became pregnant again and was delivered of a healthy child. The products of the third pregnancy were carried for thirty-seven years. At 67 she died as the result of an accident. Autopsy revealed a well-formed lithopædion.

CASE VI.—Reported by Dr. Plexa, in “Monatsschrift für Geburtshülfe,” vol. xxix., No. 4, p. 242. In this case, the diagnosis of extra-uterine pregnancy was made. Repeated attacks of abdominal pains, accompanied by fever, observed. These gradually subsided. After one and a quarter years an acute peritonitis caused the death of the patient, at the age of 40. Autopsy revealed a tubal pregnancy which had ruptured into the peitoneal cavity. The foetus was of a dark brown color and beginning to calcify.

CASE VII.—Reported by Prof. Von Graaf and Dr. Schrant, in “Genusing en Heilkunde te Amsterdam,” vol. ii., No. 1, pp.

17-96. Patient married at 12. Had seven children and three miscarriages. Twelve years before her death she noticed a gradual increase in the size of the abdomen.

The tumor was movable and appeared to be attached to the umbilicus. A diagnosis of lithopædion was made, and at her death, at the age of 42, at the Amsterdam Hospital, the diagnosis was confirmed. The tumor was found free in the abdominal cavity except at the front, where it was attached to the abdominal wall. The foetus was enveloped in a calcified membrane. The uterus was normal. Ovaries also normal. Organs and structure of the foetus easily recognizable.

CASE VIII.—Reported by Dr. Wagner in "Archives der Heilkunde," No. 2, p. 174. Patient was a widow, 68 years old. At the age of 24 she had given birth to five children. In her thirty-seventh year she again became pregnant, but was never delivered of the child. No labor pains occurred. For a long time there was abdominal enlargement and pain; finally both the enlargement and the pain subsided and health was regained, with only a feeling of weight in the abdomen. At the autopsy (it does not say how long afterward) the tumor filled the lower pelvis, and was attached to the bladder, uterus and rectum. It weighed three-quarters of a pound, and was the size of a man's head, and was covered by a yellowish membrane. The foetus was of the female sex; the head was drawn to the right and flexed. The skull was compressed, the bones overlapping. Calcification was present, but not uniformly. Organs and muscles changed into adipocere.

CASE IX.—Reported by Dr. Bossi, "Sitzungsbericht des Vereins der Aerzte in Steirmark," vol. xi., p. 37. Lithopædion was diagnosed in 1868. In 1869 and 1870 abortion was induced several times. Operation repeated in 1872 with fatal peritonitis. Autopsy revealed a pear-shaped tumor, size of a man's head, covered with a capsule which was thick and calcified. Portions of the foetus were in a natural condition, and portions were changed to adipocere.

CASE X.—Reported by Wm. Keiser in "Tübingen Inaugural Abhandlung." Lithopædion found in a woman 90 years of age in 1720. In 1674 she had all the symptoms of pregnancy, foetal movements being very noticeable. At the expiration of nine months, labor pains started up; the membranes ruptured; pains continued for two weeks and then gradually disappeared, the foetus having escaped into the abdominal cavity through a rupture in the uterus. Two children were born subsequently. Autopsy revealed a large tumor, 13.5 c.m. in diameter, covered with a capsule so hard that

a knife would not cut it, and containing lime salts. The skin was well preserved and calcified. Muscles and organs changed into adipocere. The reports concerning the position of the fœtus were not trustworthy.

CASE XI.—Reported by Smellie in his "Collection of Cases and Observations in Midwifery," vol. ii., p. 65. Patient was pregnant in 1831 with the usual signs. At the sixth month fœtal movements ceased, as the result of a fright. In July, 1733, two years and two months from the first pregnancy, labor pains returned with an apparent rupture of the membranes. At this time the child was found in the abdomen. In January, 1734, she became pregnant again, and was delivered in October. She was again delivered October 22d, 1735; also October 9th, 1738, and again June 17th, 1741. Admitted to Guy's Hospital October 14th, 1747. Died November 7th, 1747.

Autopsy showed a child in the right pelvis attached to the ileum. The fœtal integument had become partially calcified.

CASE XII.—Reported by Dr. Fales, of Boston. Mrs. A., married September 24th, 1844. Never had any miscarriages. Delivered of a healthy child January 29th, 1848. In January, 1856, again became pregnant. In March she fainted, vomited, and complained of epigastric pain, after which she had fever, continuous pain and tympanites and uncontrollable vomiting. On October 1st, the probable date of her confinement, her physician was summoned, not on account of labor pains, but on account of the excessive and painful movements of the fœtus. On October 13th, he was again summoned for the same reason. At this time "something was rubbed on the abdomen," after which the movements grew less and less and finally ceased. For the following ten years she was an invalid with a constant sense of weight in the abdomen. She succumbed on the 24th of December, 1866, to cancer of the larynx. Autopsy revealed the tumor, above the uterus, attached to the abdominal wall, otherwise free. Tumor weighed two and three-quarter pounds, eight and a half inches long, twelve inches in circumference.

Cross section showed it to be a fœtus well advanced in the process of calcification.

The most recent case reported is in the "Louisville Med. Herald," 1879, by Dr. J. T. Williams, of an ossified fœtus in a woman 70 years of age. In this case the uterus was also the seat of calcific deposits.

OXYGEN AS A DISTINCT REMEDY FOR DISEASE, AND A  
LIFE-SAVING AGENT IN EXTREME CASES.

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BY A. W. CATLIN, M.D.

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Read before the Medical Society of the County of Kings, April 21, 1891.

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Oxygen, although known to the profession for many years as a remedial agent, has not until the last decade received in any sense its true recognition. Like many other agents, it has had its history of tentative experience only to be relegated to the lists of such remedies as are either too expensive, too cumbersome, or too uncertain in their effect to retain their hold in the mind and heart of the earnest practitioner.

This also means that, in common with other agents having similar experience, it has been left in the hands of a quasi professional class—non-scientific—whose use of it resulted in no practical good.

If, in this article, proof can be adduced to show that this agent is not only a potent remedy, but has a far wider field than is commonly supposed, the object of the writer will be attained.

Primarily, and for a long time exclusively, this agent has been recommended in lung difficulties, more especially to relieve the dyspnœa and cyanotic conditions following in the train of a pneumonia where a large amount of lung structure is involved.

Another way of stating the fact that its use was *deferred* until the disease was far advanced, the strength exhausted and the recuperative powers in abeyance, in other words, a “*dernier ressort*” as a palliative and not as a curative.

Fortunately, however, for our patients, another view is now taken of this life-giving agent, and to-day we recognize the fact that if we can with a limited lung capacity (such acute but self-limiting disease being present) pass more or less continuously the same quantum of oxygen into the blood as is normally required when no disease is present, we practically lift our patient to the plane of health so far as functional activity is concerned and give him a hundredfold more strength to battle with than before.

We emphasize this question of functional activity. Disease means limitation and ultimately, if not checked by natural or other means, suspension of such activity. Where, therefore, the natural forces, *if sustained*, are the curative agents, it is eminently proper to secure by every means in our power a continuance of this activity throughout the whole system until the disease has run its course,

and thus conserve the reparative powers so necessary in convalescence.

How often we hear the sad expression: The disease was virtually conquered, but our patient succumbed because the vital forces were too much exhausted to go on with the recuperative effort—a statement which we believe is destined to become less and less frequent as the profession realize the part that this potent factor is to play in the future of medicine.

It is our desire to show—

1. That oxygen is the most sure and satisfactory stimulant that we have.
2. That by being exhibited through the lungs and not by the stomach, its entrance into the circulation is much more certain and immediate.
3. That its effect, felt primarily upon the heart, is almost as quickly seen at the nerve centres and in the digestive organs.
4. That it is preëminently the remedy for profound shock, either from hæmorrhage or nervous drain, where vitality is at too low an ebb to take up the intricate history of assimilation and repair.

CASE I.—Mrs. G., six months pregnant, after being subjected to a protracted and severe strain by the constant care of a child critically ill with diphtheria, was suddenly taken with a flooding. The hæmorrhage was so great and the shock so profound by the time medical aid reached her, it was impossible to move her from the lounge to the bed. A tampon was applied and hypodermics of brandy and strychnia resorted to. All attempts to nourish her by mouth failed—stomach would not tolerate even water. Pulse scarcely perceptible at wrist. Respiration shallow, eyesight dim; voice but a whisper. Tampon controlled the hæmorrhage, brought on some uterine contraction, and the hypodermics, which were continued, produced some reaction. In the course of a few hours counsel was sought to determine the best course to pursue to relieve the uterus of its contents. It was advised to remove tampon and put on forceps if dilatation would admit of it; but the better course was finally adopted of applying the faradic current to the fundus as the last part of the tampon was removed, which caused the uterine wall to contract firmly upon its contents, brought the head promptly down, and quickly completed the birth of child and placenta without any loss of blood—a vital consideration in view of the well-nigh moribund condition of the patient; a result which certainly could not have been obtained if the old method of entering the cavity of the uterus with the forceps had been re-

sorted to, and would certainly have put the life of the prostrated mother in imminent peril. Continuance of the current held the womb tightly contracted, and, to use the patient's own words subsequently, gave her power and conscious strength here, which she was unable to supply herself. Prostration, however, continued absolute; the stomach still refused nourishment or liquid in any amount, and the character of pulse indicated a cardiac failure which made the condition very alarming. A cylinder of fresh oxygen was then sent for, and its administration watched with the deepest interest. *Continuous* inhalations were given, and almost immediately a restful, calm expression came into the face. The pulse steadied at the wrist, and soon little naps of refreshing sleep announced that our king of stimulants was doing its work at the nerve centres. In an hour a teaspoonful of milk and lime water was taken and retained, and very soon another, till complete tolerance was established, and this in turn was followed by a demand for food, showing that our life-giving agent had reached this vital centre and that the powers of assimilation were eager to do their work. The inhalations were continued with longer and longer intervals as the strength returned, convalescence being established and recovery assured in much less time than the gravity of the case gave us reason to expect.

CASE II.—Seen in consultation, Mr. H., a gentleman 38 years of age, of good average health, taken during the grippe period with the prevailing influenza, exasperating bronchial cough and neuralgia; attack resisted treatment and patient gradually weakened till a passive pneumonia announced itself and grave doubts were entertained of his recovery. At this point oxygen was advised, and almost immediately the patient announced himself as feeling better.

The agent was continued, and recovery followed in the line of restored functional activity. He breathed better; had refreshing sleep, began to demand and assimilate nourishment and threw off the passive congestion because of renewed strength.

CASE III.—Miss S., 12 years of age, a scholar at one of our large institutions, naturally of a very nervous temperament, had the duty of speaking in public before the school required of her—a task which so disturbed and excited her that after the effort was over she was obliged to return home and go to her bed. Extreme nausea was present and absolute nervous prostration.

Respiration irregular and sighing, pulse feeble and intermitting, patient tossed restlessly from side to side and stomach refused all food. All other means failing and the patient becoming more

and more exhausted, oxygen was exhibited with immediate benefit, a calm, quiet sleep coming, first in brief naps, then, more continuously, while the heart steadied and the sighing breathing gradually ceased. After the sleep of restoration the digestive centres balanced and food was given in small quantities. The gas was continued for a few days, with small but repeated doses of *nux vomica* and a rapid recovery made.

CASE IV.—Seen in consultation and best told in the words of the attending physician, Dr. A. Hutchins. Mrs. W., anticipating her confinement December 20th, was attacked with double pneumonia November 16th. She had endured great discomfort from uterine tumor, the breathing in the recumbent position being much impeded, and the dyspnoea from the pneumonia, added to the restraint by pressure on the diaphragm from below, enforced an erect sitting posture to breathe at all. Her condition was held to be very grave and the prospect of a premature delivery imminent. Labor came on suddenly on the 24th, eight days after the pneumonic seizure, and though the labor was rapid and energetic, the patient was almost moribund immediately after the expulsion of the child. Prompt obedience to the peremptory command of her physician in taking forcible inspirations restored her breathing. The loss from hæmorrhage, the heart strain, the dyspnoea from the pneumonia, all contributed to a profound shock and depression, which the various forms of stimulants failed to overcome. Inhalations of oxygen were resorted to with manifest immediate relief about thirty hours after the completion of her labor. The inhalation was continued during sleep and while awake with very rare intermissions for forty-eight hours, and was kept up less continuously for ten days. It was a substitute for all other medication. The recovery was complete. It can hardly be questioned that the oxygen saved her life. The insufficient aeration and the weakened circulation would have made absorption from the stomach impossible; stimulants, alcoholic or diffusible, would have been of no avail; no food could have been digested or assimilated.

The ease of the administration of the oxygen was no unimportant matter in this case. It required no effort whatever on the patient's part. The persistence with which it was continued was in part due to the appreciation by the patient that the intermittent use of the inhalation diminished her comfort.

The case was asthenic from profound shock. The inhalations, of course, were never deep. As the lung cleared the inspirations were deeper, and the need of the oxygen became less imperative and less frequent. The support of the patient was maintained with

uniformity by reason of the steadiness of the oxygen stimulation. There was not the occasional fillip of doses, of internal stimulants with the consequent disturbance of digestion and depression of reaction—the invariable history of the administration of alcohol. The neatness and repose of the treatment are not trivial matters. The stimulation through the lungs and not by the stomach is in the course of natural action, and not indirect action.

CASE V.—Miss B., aged 9 years, shortly after her return to the city in September, 1889, was taken with headache, chilliness and general malaise, gradual rise of temperature and an increasing prostration that compelled her to take to her bed. The case was diagnosed as one of mild typhoid, but soon developed at end of second week so much cardiac weakness as to make prognosis grave. Patient, naturally frail and anæmic, complained of sense of oppression and cold extremities. Lips and nails were blue, and at times a dusky hue could be seen over the whole countenance. Prostration increasing with growing inability to nourish, the unfailing friend—*Walton's blue cylinder of oxygen gas*—was promptly secured and continuous inhalations given. Heart responded at once, cyanotic condition cleared up, and a gradual, but steady improvement ensued. Fever ran its course, but with the oxygen, which was continued two weeks, there was a conscious strength to battle with the disease, which meant victory in the end.

CASE VI.—Mr. F., a young man of 18 years of age, taken with chill in the night air returning from an entertainment. Case developed into typhoid, and in third week, with an average high temperature  $103^{\circ}$ , came a sudden drop in the scale, announcing hæmorrhage, which declared itself in the movement a few hours later. Turpentine stupes were applied and turpentine exhibited internally. Temperature rose again above  $103^{\circ}$ , facial expression was drawn and anxious, and a restlessness supervened that could only be masked, not subdued by narcotics. The gas was then resorted to and medicine largely abandoned. The comfort that stole into his face after the first few inhalations practically told the story, and the case, under a continuance of the gas for the ensuing ten days, ran a natural course to a complete convalescence.

In the above cases, selected from a large number, the principal points claimed for this agent are exemplified; but we desire to emphasize this fact—for it is a fact—that while oxygen is undoubtedly a great burden-lifter from the heart in cases of dyspnœa and insufficient aeration, it is something far more to the nervous system if given with a free hand as we have indicated. Nature's sweet restorer never has been so successfully wooed as by this suitor, and



where the ravelled sleeve of disease has been gathered up by this most potent remedy we see following immediately in its train all the natural processes of repair whenever such is possible.

Witness the effect produced in all the cases narrated upon the digestive centres. In every instance where the stomach was intolerant of food, this organ quickly resumed its functions and ultimately a demand for food was established—a result which a long experience with this agent leads the writer to affirm as invariable.

This, then, is the point we desire to lay stress upon. Oxygen is something far more than a mere palliative, a reliever of symptoms, or an urgency resort to keep the heart going a little longer. It is a distinct remedial agent, and will save life over and over again in such cases where the natural forces only ask for time and functional liberty to do the work.

In the "Boston Medical and Surgical Journal" of November 20, 1890, will be found an article from the pen of Dr. A. N. Blodgett, wherein he sets forth in admirable detail the results of continuous inhalation of oxygen in a case of pneumonia which would have unquestionably proved fatal but for this agent. From this history, which I would be glad to have every professional brother read carefully, we quote the following (p. 483):

"When I directed the continuous administration of the gas, I did so under the positive conviction that the patient was irrevocably doomed, and the best result that I looked for was simply relief to the sensation of suffocation, and not any curative action. The record then made in my note-book, February 18th, at 8 A.M., is 'in articulo mortis.' At this time I had only employed the gas in the manner ordinarily directed; that is, two or three gallons at a time, several times daily. I now directed its use without cessation, and, to my great surprise, the patient not only obtained the relief desired, but was enabled to carry on the function of respiration.

"The amount of gas employed was not far from two hundred gallons in twenty-four hours. The dealer who supplied the gas was astonished at the amount required, and, thinking to do me a service, sent me a cautionary message, implying that no human being could possibly stand so great an amount of oxygen, on account of the dangerous degree of stimulation to the system and the increased combustion of tissue. I have no doubt that the warning might be appropriate in any ordinary or occasional use of the gas; but in this case the temporary absence of the oxygen was followed by the most alarming symptoms, and it was only with the greatest exertion that the patient was resuscitated. I think

that the recovery of the patient from the condition in which she then was is due entirely and unquestionably to the administration of the gas. Its effect was almost as pronounced and evident as is that of a ligature in hæmorrhage.

“To my sorrow I have to confess that I am able to recall more than one case of pneumonia which has terminated in death in which I cannot but think that the timely use of oxygen gas might have been conducive toward a different ending of the disease. I am inclined to think that the judicious employment of this agent will be followed by distinct amelioration of the symptoms, and reduction of the distress in all cases of impending asphyxia. If in this way the strength of the patient may be husbanded, and the blood be maintained in a state of oxidation sufficient to allow the respiratory phenomena to go on, I think that many cases will be found in which the period of greatest danger may be safely tided over which would otherwise unquestionably be lost.”

Such is the testimony of Dr. Blodgett.

It is hard to understand the prejudice that has existed so long in the minds of the profession in regard to this agent, and even to-day has to be combated with not a few. Slowly, but surely, however, it is being recognized in its mission of helpfulness, and we believe the day is not far off when it will take rank with electricity as one of the two great life-saving agents of our day and generation.

Among the cases narrated, it was manifestly shown in one that life was saved, first, by the localized power of electricity controlling hæmorrhage, and later on by the diffused and true nerve stimulation of oxygen, whereby functional activity was continued. It only remains to add the results of experience as to the best method of exhibiting the agent.

If you would get your best results, you must administer the gas at first freely and continuously, especially in those cases of profound shock where the depleted centres of life must have this true stimulation offered unremittingly if they are to be encouraged to take up their duty again.

Theoretically only a certain quantum of gas can be absorbed. But facts are stubborn things; and the fact here is, that far more oxygen is absorbed by the blood than has been supposed possible. The only indications for a suspension of its use is a condition at once recognized by the patient, viz., super-exhilaration and dizziness; and this limitation is rarely reached in these extreme cases where the inhalations are not as deep or prolonged as they are when the strength returns and the demand for the stimulant naturally begins

to limit itself. In other words, the patient, once instructed in its use and conscious of its helpfulness, is the best guide in its administration, and can be safely allowed to breathe it *ad libitum*. The fear is they will not get enough—not that they will get too much. This of course implies that the pure gas mixed with nitrogen, two parts of former to one of the latter, is being used.

In cases of extreme debility it has been found expedient to draw the gas through the wash-bottle into a small black rubber bag, holding say about five gallons, and then, affixing a large mouth-piece and a short tube to this, place it on the pillow by the side of the patient. This saves much strength in the effort of inspiration and is the easiest way to present it, where every particle of the patient's capital must be preserved. Be sure to use *fresh* gas. Cylinders that have been kept charged over two months show by the flat taste and odor that prolonged compression changes the character of the gas, and probably, to a degree at least, devitalizes it.

Its power as an antiseptic and disinfectant we are all aware of, and is markedly seen in diphtheria, where the breath is so foul, and it has been decidedly helpful in the severe types of this disease as a coadjutant to corrosive sublimate.

If, after prolonged surgical operation, where the patient has been thoroughly saturated with the anæsthetic, and as a consequence convalescence is tardy and unsatisfactory, oxygen were to be promptly administered, we would find the reparative action wonderfully enhanced and local results far more gratifying.

The objection so often raised to it as a cumbersome remedy, not easily obtained at short notice, no longer holds, for depots are established all over our large cities, while the telephone makes it possible to reach the plant on Fourth Avenue in New York City, and secure a cylinder of fresh gas within an hour—day or night—a service which has been promptly furnished many times to the writer, and for which he desires to make grateful recognition.

There are many other conditions under which oxygen can be exhibited, always with relief even if the nature of the case is necessarily fatal; and at the end of a hopeless struggle when the grim visitor is at hand to claim his own—the poor, weary body—it is no small thing to say that it relieves needless suffering, smooths the dying pillow, and gently invites into that dreamless sleep that knows no waking here.

#### DISCUSSION.

Dr. COLTON.—We have all been delighted with this paper, as we well may be, since the author of it has certainly presented a very

charming, and, I have no doubt, so far as his experience has gone, a very truthful picture of devitalized individuals suffering from shock, dyspnoea, pneumonia and other diseases, being immediately revitalized—the color coming into their lips and complete convalescence following without delay. But flattering as this is, and flattering as the prospect it would give us of being able to go and do likewise, there must be another side to the story of oxygen. Whether Dr. Catlin has met with any failures of this agent to accomplish what it did accomplish in every case reported in his paper does not appear; but it has been the misfortune of some, certainly, to meet and see the other side of the picture; that is to say, to be most profoundly disappointed in the results from the use of the agent.

I remember a case of pneumonia which I saw in consultation, and in which I advised the use of oxygen. A very unfavorable prognosis had been given to the friends, but the use of oxygen was recommended as offering a possible means of relief. The patient, judging from his condition, would probably have lived at least until the next day. The oxygen was procured and the inhalation was begun, when the patient turned his mouth away from it and died. It was not a *propter hoc* of course, but the *post hoc* followed so promptly that a connection between the inhalation of the oxygen and the sudden death was made by the friends, as naturally it would be, and they attributed the sudden result more or less to the oxygen. Of course I did not, nor did the attending physician, but there was a case of "*in articulo mortis*" which without delay became a case *mortis* complete. In another instance, I have been equally disappointed with it. In a case of pneumonia I have given oxygen for four or five days, sometimes continuously, to the extent of 400 or 500 gallons, and the result has been as unfortunate as it could be. In one case, the patient becoming thoroughly infatuated with the idea that the oxygen was necessary to comfort, was permitted to inhale it continuously, but not perceiving any change in symptoms, as I watched them carefully, or any change in the character of the respiration, by the inhalation, I was wicked enough to turn the faucet and shut off the oxygen, though continuing to hold the funnel to the patient's mouth. The satisfaction of the patient was the same with the cock turned as with the oxygen flowing freely, and there was no apparent effect upon color or pulse or respiration.

Now I am not saying this to deny to oxygen a most wonderful power and a great value, but to prepare the minds of those who may not have used it for disappointment, if they should have formed

the resolution, from the remarks of our friend, to go out to-morrow and secure one from the jaws of death of whose life, to-night, they had wellnigh despaired.

Dr. CATLIN.—I am very glad to hear the other side of this story. There are always two sides to a story, and when you listen to the narration of a man's experience, and he gives a record of complete success, it is very natural for one to say he is an enthusiast; he cannot see anything but that one thing; he gets but one result, and perhaps he is careful not to detail the cases in which he fails to get the result. I have seen cases where oxygen has been exhibited and where death has finally come, but to my mind, even in these cases, death has been held in abeyance until it was impossible to go further by reason of organic disease which we all recognized as fatal; nevertheless, the life of the patient has been prolonged. In the case that Dr. Colton speaks of, I do not understand how the patient could have turned away from the gas and died because of it. I think it must have been purely a coincidence. I believe that in every case, even though the prognosis be necessarily fatal and you have a patient doomed to die, the oxygen gas helps to sustain the vital forces as long as it is possible, and as long as you have that before you there may be chance even for the very worst case; while, on the other hand, we know there are many cases which pass far down into the depths and would naturally slip out were not this bridge built for them. Again, it is only just that we should choose our cases for the use of oxygen. Absolute nervous prostration and partial suspension of all the vital functions, but without organic disease present, would indicate the use of oxygen, whereby we sustain the system and build the bridge till nature comes back and takes up the work again.

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## MECHANISM VERSUS SURGERY IN THE TREATMENT OF CONGENITAL CLEFT PALATE.

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BY RODRIGUES OTTOLENGUI, M. D. S.

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Read before the Medical Society of the County of Kings, April 21st, 1891.

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MR. PRESIDENT AND GENTLEMEN: Before actually taking up my subject, I desire to express to you my position, and to explain the object of this paper. Cleft palate, with all its attendant deplorable results, has naturally attracted the attention of physicians in all

ages. All operations which promised even an alleviation of the disturbances have been tried. Medical literature furnishes a full record of what surgery has done, and in addressing a body like this it would seem unnecessary to consider the advantages of one operation over another, or to describe and discuss the various surgical means of closing the fissure, whether it be confined to the soft palate, or whether it continue forward, toward or through, the alveolar process. I may assume that you are familiar with your own literature, even though some of you may not have attempted operations.

It is, however, equally probable, that you are not so well acquainted with the mechanical treatment, or perhaps I should better say the treatment with instruments to be worn by the patient.

It is my purpose to point out to you, first, that only a limited number of cases are susceptible of certain cure by surgical interference; second, that after the failure of an operation the patient may be really in a worse plight than before; and, third, to give you an account of what mechanical treatment is, and what beneficial results have been obtained, in even desperate cases.

I am associated with Dr. Norman W. Kingsley, who has made the treatment of cleft palate a life study, and through this association I have had exceptional advantages for observing and studying these cases. Through the courtesy of Dr. Kingsley, I am enabled to emphasize some of the arguments which I shall offer for your consideration by the exhibition of models taken from cases in his practice.

I most sincerely hope that I shall not be misunderstood as attacking surgery in any sense, nor unduly vaunting the claims of my own profession in this field. I aim merely to give an exposition of the subject as seen from our standpoint, with the object that a free discussion may make us all better able to determine where an operation should be attempted, or to decide that it would be better to await the time when an artificial palate could be inserted. With this knowledge, and a wise use thereof, the patients of the future should be surer of skilful diagnosis and treatment, and we should hear no more of operations repeated six or eight times, with the result of mutilations, which amount to injury.

To begin, let us consider what are the benefits which we hope to attain by *any* interference. A cleft palate renders the act of swallowing, somewhat difficult. Whether due to the exposure or not I do not know, but I have observed that these patients are abnormally liable to catarrh and other troubles peculiar to the locality. A closure of the fissure might correct this tendency, yet it

must not be forgotten that if the fissure causes the parts to be specially sensitive to disease, it also allows easy access for treatment; therefore the slight advantage of facilitating deglutition would be all that we should gain by a simple closure of the cleft. The most deplorable result of cleft palate is the interference which it causes in speech. The cleft forever prevents a normal separation of the oral cavity from the nares, so that the patient speaks with a most unpleasant nasal resonance those sounds which he can produce, while there are some sounds which cannot be articulated at all. As a consequence, he finds great difficulty in making himself understood, and unless he can be relieved he bears a cross through life. The correction of speech therefore becomes of paramount importance, and *the most beautiful closure of a fissure without corresponding improvement in speech must be counted a failure.* Moreover, I claim that the fact that deglutition is more readily accomplished would not be a valid excuse for such an operation. No patient has died of starvation due to the fact that a cleft palate prevented the swallowing of food; while on the other hand, patients whose speech might have been corrected by mechanical means have been greatly injured by operations, which, after failure, left the parts in a condition which rendered the application of an artificial palate less promising.

What is essential in every case in order to restore the function of normal speech? The answer is very simple, though its attainment is most difficult. It must be possible to completely shut off the cavity of the nares. This is normally accomplished by the coincidental approach of the soft palate and the posterior wall of the pharynx, which latter rising forms a well-marked ridge, against which the soft palate presses by elevation. It follows, therefore, that though the edges of the cleft may be brought together and union effected, unless the soft palate is long enough to meet the wall of the pharynx under the action of the muscles, the nares will not be cut off, and, practically, nothing will have been accomplished. Thus a beautifully æsthetic result might be attained by operation, which nevertheless would be of no benefit whatever in correcting abnormalities of speech.

We may say that there are three classes of cleft palate. Where there is simply a fissure through the velum; where it also involves the bony roof of the mouth; and where there is a complete cleft, passing through the alveolus. In the first condition the nares may be, and usually is, normal. In the second, the vomer is generally seen attached to one side of the fissure, the other side presenting with a free border. It is unusual to find the vomer detached,

though it does occur occasionally. In the third class, the vomer and turbinated bones are generally atrophied.

As the final success of operations in either condition will be dependent upon the success attained in uniting the edges of the cleft velum, we may discuss that first.

If we ask a patient to sit with the head thrown back, and the mouth open, so that we may freely watch the cleft palate, we will observe presently that accumulation of saliva causes deglutition, and we see the action of the muscles cause the divided ends of the uvula to approach each other, so that at the moment of fullest extension the space across the posterior extremity of the cleft becomes the narrowest part of the fissure. From this it follows, and is a fact, that in closing a cleft it is usually easier, first, to bring together the posterior edges—that is, the divided uvula—and take a stitch. If this be done, we have left an elliptical opening, with a decreasing amount of soft tissue as we work anteriorly. Supposing for a moment, though it is a doubtful fact, that after the uvula has been united, the palate be long enough to meet the posterior wall of the pharynx, as would be requisite for perfection of speech, it becomes difficult, if not impossible, to close the remainder of the fissure without shortening the palate. If such closure be attempted by bringing the edges of the palate together, each new stitch draws the uvula further forward because of the lack of tissue. If incisions be made laterally to relieve the tension, or if flaps be turned in, it requires the coincidence of great skill, favoring after circumstances, and good fortune, to accomplish a satisfactory result. Where the tissue is not really abundant, it would be folly to hope for a fortuitous outcome, even where the temperament of the patient, and surrounding circumstances, were most favorable. The strain put upon the tissue is frequently so great that a slow relaxation occurs, resulting in a pulling out of the stitches. Often, in such event, perfect and continuous union of the uvula occurs. This results in a condition of no practical advantage to the patient, while it makes mechanical appliances more difficult of construction and less advantageous.

I will now pass around a few models which make my remarks clearer. No. 1 is a case which seemingly should have been a success at the hands of a surgeon. Perhaps some other operator might have obtained a better result. Observe that the cleft originally was a small one. The case as it presents shows that the uvula united, while the anterior portion of the cleft reopened. Does it not seem that there was sufficient tissue here to make a surgeon hopeful? Yet notice, that even if the cleft had been en-



tirely closed, the palate would not have been long enough to shut off the nares by reaching the pharyngeal wall. Model No. 2 shows a larger cleft with a similar result. No. 3 shows the extremity to which ardor may carry a man. With an enormous fissure reaching forward through the alveolus, the operator nevertheless attempted to unite the divided soft palate, and succeeded in bridging across the posterior part of the cleft, even then falling far short of reaching the back of the throat. Models 4 and 5 (Figs. I. and II.) show

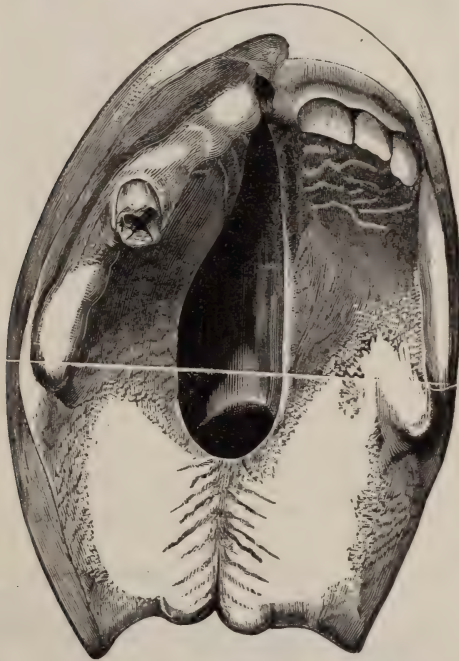


FIG. I.—CLEFT PALATE AFTER THE OPERATION.

The marks from the stitches show the palate, though well united, is too short to reach the pharyngeal wall.

a similar case with a better result. The whole soft palate is well united, and were it but long enough would have greatly benefited the patient. If the palate had not been operated upon, an instrument such as is shown in Fig. 5 would have been all that was needed. The surgical palate, however, is so short that in addition to the plate which covers the remaining opening, a soft rubber palate was attached to the instrument by a gold button, extending through the fissure and back toward the pharynx, practically elongating the palate (Fig. 3). A similar fixture was worn by patient No. 1, and it is manifest that it was very difficult to arrange an

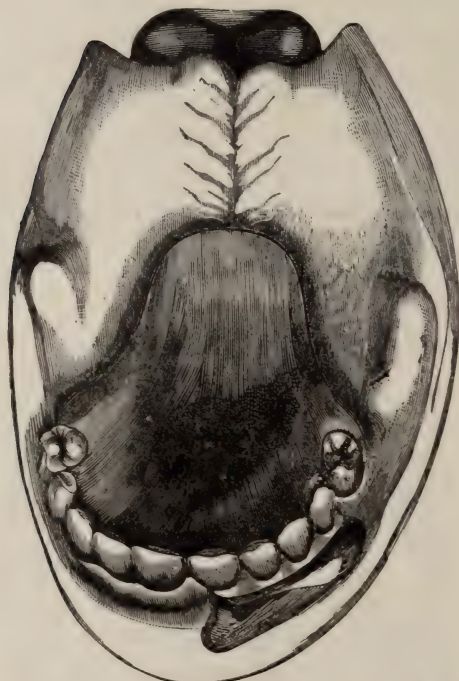


FIG. II.—SAME CASE WITH INSTRUMENT IN PLACE.

The soft rubber velum serving to elongate the palate.

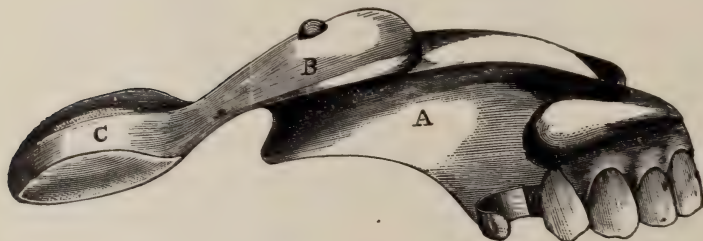


FIG. III.

*A* is a hard rubber obturator, *B* the elastic extension, and *C* the apron or palate occupying the space in the pharynx.

apparatus which should pass through the small aperture and then uncurl itself, producing a width equal to the palate. In that case, therefore, the patient was really incommoded by the result of his operation, because, with the cleft fully open, a much simpler device could have been worn.

When a case of this kind finally comes to the dentist, he regrets the union of the uvula, but does not feel quite justified in separating it again, though this has been done with advantage to the patient.

It is my opinion that where a surgeon has conscientiously attempted a closure of a fissure, and in the end, having failed, is about to abandon the case thus bridged across at the posterior extremity, he would do well to sever the uvula and leave the patient as he found him.

This is not the only kind of operative failure which we see. I offer for your consideration Model No. 8. Beside it I have placed No. 7 for comparison. The latter is not the same case before operation, but it is so singularly like it that we may justly compare them. In No. 7 we have a large cleft, but as it does not extend into the hard palate, and as the nares therefore is normal, we can supply an instrument with the justifiable expectation of reaching absolute perfection of speech. In No. 8, however, the case is very different. The failure of the operation has left the parts frightfully mutilated, and perfect success with an instrument should not be expected.

Models 11 and 12 are two similar cases, similar to each other, though again not taken from one patient. It is a curious fact that almost any model can be duplicated in this manner. No. 12 is from an impression taken with an instrument in place. The anterior part is made of gold or platinum, and the posterior appendage is of flexible vulcanized rubber, such as will be shown later.

Thus it is seen that in unfavorable cases, or where an operation is unsuccessful, the patient may be left in a worse condition than when he applies for relief.

Models 13 to 26 inclusive are presented to show the varieties of clefts in the soft palate only, though in one or two the hard palate is slightly invaded. Several of them show distinctly that it would be easy enough to unite the divided uvula. Whether *any* of these could have been helped by surgical means is an open question. They have, however, *all* been made to speak well with artificial palates.

We come next to cases where the cleft is through the soft and hard palate, and involves also the alveolus. By some it has been advised to operate even in these large clefts, with the object of closing the entire opening. A few accomplish this by removing the intermaxillary bones, where the fissure includes both nasal passages, paring the edges of the cleft in the region of the hard palate, and then by exerting pressure with a clamp

placed around the outside of the alveolar process, the bones are crushed together, and then held until union occurs.

*I do not hesitate to say that the removal of the intermaxillary bones is malpractice.* If closure of the fissure be accomplished, other evils result which must condemn the procedure. In the first place the germs of the central and lateral incisors are almost sure to be lost. This brings us two cuspid teeth at the median line, in adult life. If these teeth were even in contact, there would still be an opening due to the pyramidal shape of the teeth, which would make perfect articulation improbable. This, however, seldom happens, the more frequent result being that healing leaves a V-shaped gap in the centre of the mouth, destroying the integrity of all dental sounds, and affecting markedly the labials, for a reason which will be alluded to. Model 10 shows a case which was operated on in this manner. The approximation of the cuspids at the median line, the V-shaped gap, and the small advantage gained over the cleft are well shown. Model 9 is placed next, being somewhat similar; model 32 is also very like. In No. 9 the intermaxillary bones are absent as a freak of nature, though we still have one of the incisors, as we do again in No. 32. Both of these have the advantage over No. 10 of presenting with greater space between the cuspids, allowing artificial substitutes to span the gap, and round out the front of the mouth. Model No. 6 is similar to No. 10. Here, however, the operator, by a happy chance, did not remove the germs of the lateral incisors, though he may have disturbed them, since the teeth appear dwarfed. The arch is full, but, owing to the shortness of the incisors, there was a space on occlusion, which resulted in a hissing sound as an accompaniment to sibilants. Though in this case the surgeon has partly closed the fissure through the bone, I do not consider that what he gained compensated for the loss of the central incisors.

There is another point to which I promised to allude, namely the effect upon the lips. It must be remembered that where the cleft is so great, there is usually a hare-lip also. If the surgeon determines to remove the intermaxillary bones, and crush the processes together, he would probably delay the operation on the lip till the bones have united, or he might do it coincidentally. In either case, as he has reduced the arch, there is little temptation to endeavor to produce a full lip. In the adult, then, we have a *reduced* upper arch, a *tense* upper lip, and a *normal* lower lip. By reducing the width of the upper arch, occlusion with the lower jaw would normally be impossible. But nature, accommodating in all things, arranges this matter so that the teeth do antagonize. This

however, is effected by a tipping inward of the molars and bicuspids of the lower jaw, which has a tendency to protrude the anterior six teeth, or at least, by narrowing the arch, the lower lip becomes protrusive and bulky in front. I have in mind a case of this character, where scarcely any closure was effected, though all the deformities pointed out resulted. The lower lip protruded so much that a profile view showed it to be as prominent as the nose, giving the countenance a most displeasing appearance, and positively preventing perfect enunciation of many sounds.

Another consideration should actuate the surgeon before he attempts to operate upon a cleft of this magnitude. Is it justifiable to undertake a surgical operation, where we know in advance that final success can only occur after a second and less feasible operation shall have been accomplished some years later? A perfect closure of the hard palate, whether by crushing together the young bones, or by bridging across with flaps of soft tissue, would be of but trifling advantage, unless subsequently a closure of the cleft in the soft palate could be effected, *producing a palate of normal length*. Thus the surgeon who operates on the hard palate of the infant, must risk waiting till the child is old enough for the second operation, with the knowledge that by that time other hands than his may have charge of the case—a condition of affairs which is assuredly not tempting.

The remainder of the models show extreme cases of cleft palate, which certainly do not offer the surgeon a fair field upon which to work. No. 32 is a beautiful model, because it shows the ridge formed by the elevation of the pharyngeal wall, as well as the split uvula drawn back into contact with it, by the action of the muscles in resisting the passage of the impression material down the throat. We see in this case that a soft palate, though cleft, may be brought into contact with the pharyngeal wall. It is only when the two parts of the uvula are brought together by stitches, that the consequent shortening prevents this contact.

No. 27 is a most interesting case. It will be observed that it is the mouth of a child. The sixth-year molars are the only permanent teeth in position. Until recently it has been the practice of Dr. Kingsley to postpone making appliances until the twelfth or fourteenth year. Two years ago he was persuaded to make an instrument for a child four years old, and the improvement in that case has been so rapid and so satisfactory that since then he has made instruments for children whenever possible to utilize their temporary teeth for retention. This model is from a girl of seven,

and she is wearing a flexible rubber velum similar to the one which I shall show.

There are interesting features about each and every one of these models, and full records of all the cases would not be without value but I cannot undertake such descriptions in a paper of this character. There is one fact, however, of importance, which is, that all of these cases, the deplorable case seen in No. 33 (Fig. IV.) as well as the simplest, have been satisfactorily treated by mechanism.

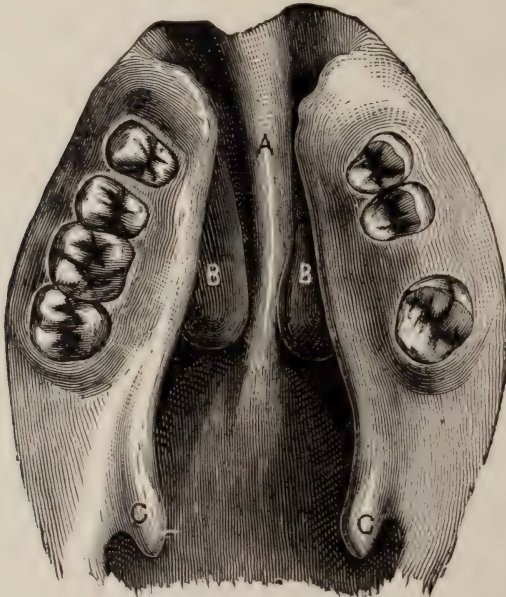


FIG. IV.—EXTREME CASE OF CLEFT PALATE, INVOLVING SOFT AND HARD PALATE AND ALVEOLAR PROCESS.

Many of the patients have come under my observation and care, with speech so perfect that I never suspected a cleft palate until an examination of the mouth disclosed the presence of the instrument. In one instance I filled three teeth in the lower jaw, operating at three different sittings, and did not discover that the patient had a cleft palate until my attention was directed to a tooth on the upper jaw, when to my surprise I saw the artificial palate. Under these circumstances, and admitting, as you must, that surgery has effected but limited success, mechanism claims your attention.

As I considered it unnecessary to describe modes of operating, so do I think it unprofitable to rehearse the various methods which have been tried and abandoned in the endeavors made to improve

speech with an artificial palate. I will come at once to a description of the instruments used and originated by Dr. Kingsley, which are admitted to be the best devised and all-sufficient.

To thoroughly appreciate the advantages of the curious form of the Kingsley flexible artificial velum, we must recognize the conditions, in which it is to be employed. Look at any of the models which have been passed around, and observe that the cleft soft palate ends, on each side, in a bulbous portion, which is one-half of the uvula. From these forward to the edge of the hard palate, where that is intact, or to an equivalent point where the cleft invades the bone, the velum extends, with a free border, forming the two sides of the cleft. The posterior extremities of the cleft velum may be elevated and drawn backward by the action of the muscles so as to touch the posterior wall of the pharynx, as is well shown in No. 32. By this action, however, the nares is not cut off, because of the cleft. The problem, then, was this: Can a flexible material, be moulded into a form which would be tolerated by the sensitive natural velum, to such an extent and of such a form that the muscles which elevate the two parts of the cleft palate, would at the same time lift the artificial velum, carrying it up and against the pharyngeal wall, so that it would be tolerated by that sensitive tissue, and withal perfectly shut off the nasal cavity? Experiments with flexible materials have been made by others, who showed great ingenuity in their contrivances, but the results were not satisfactory, mainly because, as constructed, the instruments could not be tolerated by the sensitive parts with which they were brought into juxtaposition. An error of the best was, that advantage was taken of the flexibility of rubber to obtain the result desired by compelling the cleft velum to compress the fixture. It remained for Dr. Kingsley to discover that a foreign body of this nature, to be tolerable, must be as flexible as the natural tissue, and that this could be attained by making the edges of the artificial velum so thin that they would yield at the slightest pressure. Moreover, instead of compelling the cleft velum to *compress* the instrument, he provided for the necessary movement, opening and shutting of the cleft velum by allowing the free borders thereof to have free play between thin soft rubber flanges. In order that you may thoroughly understand, what no description, in mere words, can adequately portray, I have brought a model of a cleft palate, to which is attached an instrument and artificial velum (Fig. V.). You will observe, in the first place, that the plate is made of metal. Many have been made of hard rubber, but metal, because of its thinness, and for many other reasons, is by far the most prefer-

able. This metal plate is retained in place by clasps which encircle the teeth. It may be opportune at this point to reply in advance to an old argument which has been made against this method of retaining a fixture, viz., that clasps wear out, or cause decay in the teeth which they touch. To answer this briefly and dogmatically, I will only say that if the clasps are scientifically placed, skilfully adapted, and worn by a patient of cleanly habit, no such misfortune need be apprehended. I would call attention to the fact that the plate should not reach the anterior teeth. Many sounds are produced by touching the gum, just back of the incisors with the tip of the tongue. Notably I may mention D and T. These are

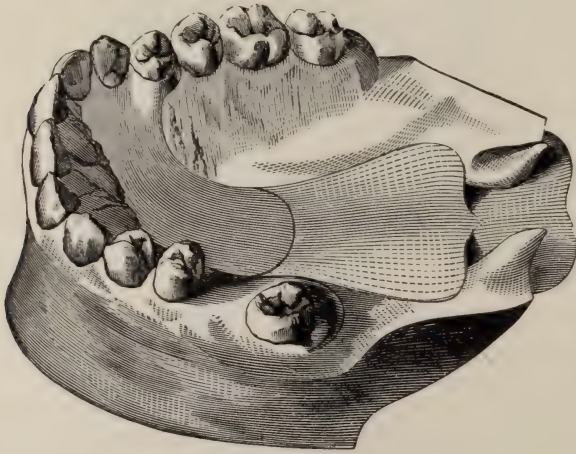


FIG. V.—CLEFT PALATE WITH INSTRUMENT IN POSITION CARRYING SOFT RUBBER VELUM.

sounds which almost every patient suffering with a cleft palate finds more or less difficult, though chiefly from bad habits of articulation. Therefore, wherever possible, the gum in the incisor region is left uncovered by a plate. In fact, it is best to make the plate as small as would be compatible with the requirements of strength and stability.

Next we come to the velum itself (Figs. VI. and VII.). This is made of flexible vulcanized rubber, and is buttoned over a stud on the upper side of the metal plate. Attachment in this manner allows lateral motion if it is desirable, though usually no such motion is requisite. I mention this because I have seen it claimed that such movement is always necessary, which statement is undoubtedly the result of limited observation on the part of the writer.





FIGS. VI. AND VII.—SOFT RUBBER VELA SHOWING EXTREMES OF SIZE.

The only motion which is invariably essential is an *upward* one, and this the flexibility of the material readily allows. The velum is, practically, two plates of rubber, placed so that one rests above and one below the free border of the cleft velum (Fig. VIII.). These

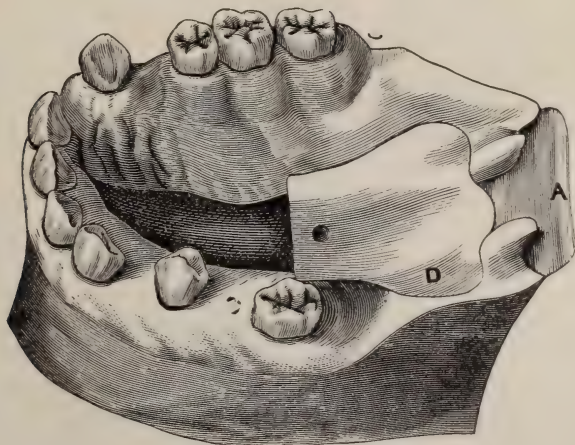


FIG. VIII.—VELUM IN POSITION.

*A* and *D* flanges above and below the divided soft palate.

two plates are united into a continuous piece by being joined along the median line, but only to a limited extent, so as to obviate any impingement against the cleft velum in the closest approximation of the two sides. The upper half of the artificial velum (*A*) is

long enough to reach well beyond the uvula, and to touch the back of the throat when thrown up by muscular action. The back edge is curled and made thin, so that when it touches the pharynx it rolls so that a flat surface is presented. This patients will tolerate after a few hours, and some are not disturbed even at the first insertion. The other flaps or flanges (*D*) extend back only as far as the bases of the uvula, which allows those bulbs to hug the piece closely when the muscles close the palate. All of this is well shown by the model which I have passed around. With it to look at you can readily see that when an attempt is made to shut off the nasal cavity, the two sides of the cleft velum approach each other between the flanges of rubber; this results in an elevation of the posterior end of the soft artificial velum, till it comes in contact with the ridge of the pharyngeal wall, when its end curls against the natural tissue, and effectually closes the approach to the nares.

The result is seen to be closely similar to normal action, and we naturally hope for an improvement in speech. Our expectations are usually fulfilled if the instrument is skillfully constructed and the patient gives proper attention to the education of his vocal organs thereafter.

It must not be expected that the mere insertion of a combination of metal and rubber, however ingeniously contrived, will cause an immediate metamorphosis of speech. Much depends, of course, upon the age of the patient; but even at the early age at which Dr. Kingsley has recently interfered, abnormal habits have been contracted which must be overcome. There are some sounds, as *k*, and *g* hard, which cannot be made unless the nasal cavity is shut off. In the effort, therefore, to produce these, the sufferer has resorted to extraordinary measures. Sometimes the tongue has acquired an unusual degree of flexibility, and can be raised so high that the cleft may be partially closed and an approximation of the desired sounds produced. I have seen the muscles which control the *alæ* of the nose so trained that the orifices of the nose would be closed with every *k* sound. This activity of the *alæ* is a habit most difficult to overcome, and a teacher is required who understands how to instruct a cleft-palate patient to use an instrument to the best advantage. After a little teaching, the pupil readily appreciates the obstacles which he must surmount, and by continued effort attains continuous improvement in speech, until, as I have said, there are many whose enunciation give no evidences of abnormality.

I now come to the second kind of instrument, which we term an obturator. This has a platinum plate similar to that of the

other, but in place of the soft rubber velum there is attached a hard rubber bulb (Figs. IX. and X.), made hollow for lightness, and so formed that the two halves of the cleft palate play under and around it, while the posterior wall of the pharynx reaches it when the effort is made to close the entrance to the nares. Obturators are made for two classes of patients, principally for those who present with a cleft occasioned by disease or accident. For these, accustomed to normal speech, anything which properly closes the



FIG. IX.—PLATINUM PLATE CARRYING HOLLOW HARD RUBBER OBTURATOR.

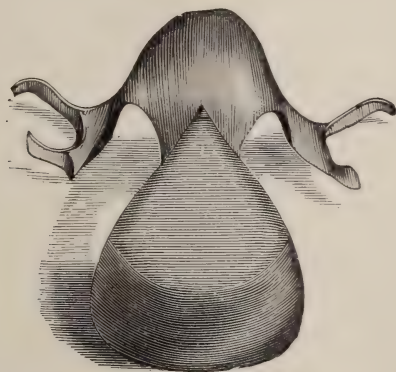


FIG. X.—REVERSE OF FIG. IX.

gap will restore articulation. Again, an obturator is sometimes given to a patient who has a congenital palate, *after he has learned to speak perfectly with a soft velum*. It will occur to you to ask, Why the substitution? In reply I must state that the soft rubber velum unfortunately disintegrates in the mouth, so that new ones must be made from time to time, whereas the hard rubber obturator is more durable as well as more easily cleansed. I think this an opportune

place to introduce a table of statistics which I have compiled as to the length of time that these vela last. I do this because recently an adverse critic has stated that they need renewal so frequently that the patient is under constant expense and annoyance. I have gone back fifteen years in order to get my data, and I chose the first thirty patients as they appeared in the records of Dr. Kingsley's practice. It will be observed that in the subjoined table some do not appear to have been under observation so long. This is explained by stating that some have died, and others have not been heard from in several years. Whether they are still wearing the last vela supplied, or have died, we do not know :

No.	1	has been supplied with	2	vela in	4	years.
No. 2	"	"	"	17	"	15
No. 3	"	"	"	3	"	3
No. 4	"	"	"	2	"	2
No. 5	"	"	"	2	"	2
No. 6	"	"	"	17	"	15
No. 7	"	"	"	7	"	15
No. 8	"	"	"	3	"	5
No. 9	"	"	"	4	"	2
No. 10	"	"	"	3	"	3
No. 11	"	"	"	6	"	15
No. 12	"	"	"	13	"	15
No. 13	"	"	"	11	"	14
No. 14	"	"	"	5	"	5
No. 15	"	"	"	16	"	8
No. 16	"	"	"	4	"	4
No. 17	"	"	"	4	"	12
No. 18	"	"	"	17	"	15
No. 19	"	"	"	10	"	15
No. 20	"	"	"	13	"	15
No. 21	"	"	"	11	"	15
No. 22	"	"	"	3	"	15
No. 23	"	"	"	6	"	9
No. 24	"	"	"	7	"	15
No. 25	"	"	"	11	"	11
No. 26	"	"	"	6	"	15
No. 27	"	"	"	5	"	15
No. 28	"	"	"	4	"	8
No. 29	"	"	"	10	"	7
No. 30	"	"	"	2	"	8

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 302

This gives an average of sixteen months as the time during which a rubber velum will retain its usefulness. From an examination of the table we discover that the worst record is four vela in two years, an average of only six months; while the best is

three in fifteen years, an average of five years. We also observe that the majority use about one velum per year. The first cost of furnishing an instrument is necessarily high, because of the amount of labor and skill involved. To furnish duplicates of the vela, however, is simple and the fee for the same but five dollars. Assuredly five dollars a year is not a high price to pay for speech.

That you may understand exactly what an obturator is, I pass around a model which has one attached. This is a practical instrument, kindly loaned to me by the patient for this occasion. While you are looking at it, I desire to say a few words about this special case. It is directly because of this case that I have prepared this paper. A few months ago one of her instruments needing repair, this patient reported to me. At that time she stated that an eminent surgeon had for months been endeavoring to persuade her to undergo an operation, telling her that her artificial palates were "good enough in their way," but not comparable with the result which he could assure her from surgery. This, to me, was an astounding assertion, and one which made me feel at the moment that it was time either for surgeons to prove that such extensive cases as this can be helped by operation, or else to assent to the limitations which the conditions compel, and, in justice to patients, refer such sufferers to the dentist.

The history of this case covers over fifteen years of treatment. At the age of twelve, the child could not make herself understood by others than her parents and immediate family. She applied to Dr. Kingsley, who made for her an artificial palate consisting of a platinum plate with soft rubber velum attached. She was carefully taught to speak, and learned rapidly. After ten years of using a soft velum, needing a new instrument, it was deemed safe to supply her with an obturator, which was subsequently made in duplicate, so that she has two. With either of these instruments she now speaks well; not as perfectly as some, but with entire distinctness. The only fault in her speech is a slight hissing sound with sibilants, which I attribute—though perhaps I am wrong—to the opening through the alveolus. The peculiar position of the teeth, and the impossibility of covering them with the artificial substitutes so as to prevent the escape of air, may also be a factor. But the improvement from the beginning is marvelous, and her speech at present is satisfactory to herself, her husband and her friends. Now if we examine the mouth, or the model which you have, it is seen that the vomer is attached to one side of the cleft. How would a surgeon proceed to close this enormous gap? To attempt a bony union would be an absurdity. The bones cannot,

or should not, be crushed together in adult life. I can conceive of but one mode of procedure. It might be possible to dissect up the tissue which covers the vomer, and, raising it, to attach it to the free margin of the opposite side of the cleft. This would give a soft tissue bridge across the opening in the hard palate, which would extend back as far as the posterior margin of the vomer. But what would this accomplish? No benefit whatever. It would still be necessary to close the cleft in the soft palate, and here the cleft is so wide, and tissue so scant, that there would not, in my opinion, be a chance in a thousand to produce a palate of sufficient length to effect improvement in speech. If the chances, then, are so slight, why should a surgeon be willing to risk so difficult an operation for such meagre results, especially when the patient is satisfactorily supplied with instruments which render her defect unsuspected by any but the professional man.

Gentlemen, if I have offered you food for thought, and caused you to think seriously of the question, "What are the limitations of surgery in the treatment of congenital cleft palate?" I shall feel that I have accomplished my object. I thank you for your attention.

#### DISCUSSION.

Dr. NORMAN KINGSLEY.—It may be of interest to you to know something of the history of our experience in working out the ideas which Dr. Ottolengui has given you in the paper.

My attention was first called to this subject more than thirty-three years ago, and the cleft that was shown me at that time was one of the most extensive I have ever seen. I knew nothing at all about the treatment of cleft palate then except what I had read of surgical operations; but realizing that surgery, so far as I had seen the results of these operations, had failed to benefit the speech, I set out to see what could be done. After a great deal of thought—it was not done in one night, or month or year—I seemed to have discovered this one fact: that perfect speech involved the necessity for the natural velum to come at times in contact with the posterior wall of the pharynx, and thus completely shut off the passage of the sound as it issued it from the larynx. Certain sounds in the English language must go entirely through the mouth; other sounds must pass entirely through the nasal cavity, and still other sounds must pass both ways. Perfect speech according to our notion of speech involves these three things: that there shall be a passage that can be shut off in such a way by a valve working between the two passages, so that at times the sound is directed one way, and other times both ways, and with organs of that character

any one can speak the English language or any other language as it is spoken, correctly and perfectly. But the moment you split that valve, or open a hole through it, or render it in any way imperfect, you immediately destroy the ability to perfectly articulate speech. Now the point to consider was, how could we restore that absent velum, restore that gap, and give to it the function of a whole velum? The result of all that thought was the making of an instrument such as has been passed around here to-night, but that particular form just as it appears there, and beyond which I have not been able to improve upon, came into my mind while sitting in Exeter Hall on the night of December 11th, 1864, while my associates were listening to an oratorio. I did not hear a sound of the music. I went home that night and made a paper model that was identical with the velum passed around here to-night.

I had an interesting experience at that time in London. I made some instruments for some patients there, hospital cases, and they immediately showed an improvement in speech. But with all my claims as to the necessity for any interference in these cases, the necessity involving that a velum should be made that would act as I described, with all I had said on this subject before medical societies and dental societies in London, and such men as the late Sir Wm. Ferguson, who had an enormous reputation for operating on cleft palate, it did not do a bit of good. They said it was well enough in its way, but it would never amount to anything.

I took one of my best patients to Sir Wm. Ferguson one day—a lad of eight years—and he looked down at the boy in his lofty way, and looking into his mouth said, "That is very well, my lad, but when that fails you, come to me and I will sew you up." Mr. Pollock took me one day into the wards of St. George's Hospital and showed me his operation. It was one of the finest surgical operations I ever saw; beautiful union throughout the entire cleft, even down to the very tips of the bifurcated uvula. I asked him how long the operation had been performed, and he told me twelve months. I asked, "How does he speak?" He said, "I do not know." I had a newspaper in my pocket, and I handed it to the patient, who was a man about thirty years of age. He started to read. We were not either of us deaf, and we could hear sounds. I said, "Do you know what he is reading about?" And he said he had not the slightest idea; nor would anybody; it was absolutely unintelligible. So far as the object sought was concerned, the operation was absolutely valueless; it did not do the man one particle of good. The reason was, as Dr. Ottolengui stated, because that beautiful union had been attained at the expense of the

length of the palate, leaving a great hole behind it which could not be closed. I have seen a few cases of operation, possibly one-half of one per cent of cleft-palate cases where I could feel the surgeon was justified in operating after the patients had reached twelve years of age. But with all that I can reasonably claim as the result of what has been done with instruments, I am looking forward and hoping for the time to come when surgeons will have boldness enough and skill enough to take the average cleft-palate infant and sew up the gap and get good union and make it totally unnecessary for the patient in after life to have to resort to appliances. I believe it can be done in the majority of cleft-palate cases provided it is done as early as you would sew up a hare-lip. If you can get union at that age, and then if it is impressed on the parents and friends that the child must be taught to talk, with the natural growth of the child and the teaching, the palate will develop, and I believe they will learn to speak as normally as you or I.

Within a year or two a little child about two years of age was brought to me from Newark, and I saw that it was a very favorable case for operation. The cleft did not extend into the bone at all, but just reached to the posterior border, and while the tissue of course was small and thin, because the child was a baby, still it was as favorable a case for surgical interference as I had ever seen. I told the parents if they could find an honest and conscientious surgeon, and one who was skilled, that would undertake to operate, they should better risk it. They asked to whom should they go, and I told them to go to Dr. Garretson, of Philadelphia, who has made himself somewhat famous as an oral surgeon.

He fills a professorship in the Philadelphia Dental College, and is a cultured, skilful and conscientious man.

Perhaps a year passed away, and they brought the child back to me with the cavity sewed up, but Dr. Garretson had not done it; he did not feel sufficient encouragement to justify it, so they fell into the hands of somebody else, and he had made an excellent operation, but the palate was not long enough to reach the pharynx, and more than that, it had broken away at the apex of the fissure and there was an oblong hole as large as two good-sized peas. I made for that little child, then about four years of age, what we call an obturator, a hard and immovable instrument. The hole was closed up with the obturator, and the child was put under the training of a teacher of articulation who knows how to teach these people, and in a very few months she could speak better than most children of her age; indeed her speech is perfect for a child of her age, and



you can see that there is an increased movement of the palate, and if it does not actually already touch, it will as the child grows older.

So you see what encouragement there is for surgeons to attempt these things at that age, for in the very few cases where surgery has accomplished a flexible and long velum, I have never seen one that would completely close the passage to the nares.

Dr. OTTOLENGUI.—There is one point that I did not touch on in the paper, and that is hare-lip. That is, of course, always to be operated upon, but I have seen some cases which, though good, made one wish that the surgeon might have done just a little better, especially where the cleft lies behind the orifice to the nares. There should be an effort made to get the orifice to the nares as small as possible, because even in this very case we have been discussing you can see that there is still a cleft through the alveolar process, the hare-lip originally extending up to the nares; and looking at that now and seeing a large orifice to the nares, one wishes that a little better plastic operation had been performed there. If the surgeon will make the lip as long and the nostril as small as possible, it would improve the speech.

I would also like to record a unique case which I saw about a year ago. The patient lives in Brooklyn, and I think was sent to our office by a Brooklyn surgeon or dentist. She had no cleft palate, and yet she could not speak. Examination showed she had simply a short palate; she was born with a palate too short to reach the pharyngeal wall. When she speaks you cannot very well understand anything she says, and it occurred to me that that seemed to be the standard of success that could be hoped for in operations. If a surgeon could get such a palate as that, he would have a cast made of it and boast, and yet here was a woman born that way who was looking for help, which of course we could not give her.

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## PNEUMONIA FOLLOWING FRACTURE OF STERNUM.

BY P. SCHOONMAKER, M.D.

I recently had a case of pneumonia that is of some interest, from the absence of most of the usual symptoms, and from its occurring after a fracture of the sternum produced by muscular action. The patient was practicing on the parallel bars in the gymnasium and fell, fracturing the sternum near the junction of the manubrium with the gladiolus.

John M., German, æt. 19 years, received the above-mentioned injury Nov. 19, and following this was exposed to the inclement weather while driving a market wagon.

On Nov. 24 he was taken with a slight chill and had some fever for three days. On the 27th I was called to see him, and found him with a temperature of 103° F., pulse 120, and respiration 24. Occasionally a slight cough and muco-purulent expectoration; rude respiration over lower lobe of right lung. The only pain was at seat of fracture on coughing or muscular exertion. Other than this his symptoms were negative.

The following day his temperature rose to 105<sup>2</sup>/<sub>5</sub> in the morning and evening, with a remission at midday to 102<sup>1</sup>/<sub>2</sub>; respiration was 28 and pulse 132.

Under the influence of an antipyretic the temperature fell to 101<sup>3</sup>/<sub>4</sub>, and remained below 102 during the course of the disease. The respiration varied from 16 to 25. There was no dyspnoea, even when the temperature was high. The only symptoms found on physical examination were bronchial breathing and slight dulness on percussion, although had he been examined a day or two before I saw him, probably the crepitant râle could have been heard.

The disease ran its course in about eight days, the temperature falling to normal, and he made a good recovery.

The case occurring after the fracture of the sternum, and so few of the usual symptoms were present it was difficult to make a positive diagnosis at first, but later on the diagnosis was verified by the characteristic sputa which was not present in the beginning.

I never have had a case that gave so few of the positive symptoms of pneumonia.

#### DISCUSSION.

Dr. R. VAN SANTVOORD.—In some cases of pleurisy bronchial breathing is discovered, but it is not as distinct as is pneumonia. Pleurisy is more apt to follow injuries to the chest than in pneumonia. I would like to inquire if the line of dulness was over the lesion?

Dr. SCHOONMAKER.—No. The dulness was confined to the lower lobe and was limited to the line marking the division from the upper lobe.

Dr. M. McLEAN.—While I was interne in Bellevue Hospital, a man was brought in who had jumped from High Bridge while intoxicated. He struck the water on his side but did not fracture the ribs. He was extensively bruised, and developed pneumonia as a result of the concussion. This nearly proved fatal, but he subsequently recovered.

Dr. J. GARDNER SMITH.—An old lady, 74 years, was under my care who fell and received considerable injury over the ribs of the right side. There was no apparent fracture. The pain was very severe. At the end of two weeks pneumonia developed, which proved fatal in two days. Autopsy showed the internal layer of bone of two ribs was fractured, and these had irritated the lung so that pneumonia developed.

Dr. G. S. KNICKERBOCKER.—During my term of service in Bellevue Hospital a man was brought in with extensive fracture of the ribs. He died of pneumonia. The pneumonia was confined to the localities adjoining the fractured ribs.

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### FATAL HEMORRHAGE FROM ULCER OF THE STOMACH IN THE NEW-BORN INFANT.

BY G. H. COCKS, M.D.,  
New York.

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De Lacy, male child, born Feb. 24, 1891, 3.30 A.M. Birth normal. Child well formed and weighed about seven pounds.

Nothing unusual was noticed until about 4 A.M. of Feb. 25, when he vomited large amount of clear blood. On seeing the napkin, I judged he had vomited fully one ounce. He had had three other attacks before 10 o'clock A.M. I ordered Ergot ext. fld., gtt. ii., every two hours. This did not control the hemorrhage, so at 7 P.M. I ordered gtt. x. to be given.

At 10 P.M. saw him with Dr. E. L. Cocks. He had not vomited any blood since 7 P.M., and none had passed per rectum. The movements from the rectum looked normal. On examining throat, to see if there was any hemorrhage from the pharyngeal walls, the baby vomited two teaspoonfuls of dark blood. This had evidently been acted upon by the gastric juice.

Dr. E. L. Cocks advised gallic acid in gr. i., dose every three hours. The ergot to be continued in five-drop doses.

Feb. 26—10 A.M.—Baby could not retain the gallic acid. The ergot was retained. Had several rectal movements, one of which contained large amount of blood. The child was evidently sinking. I continued the ergot, but it did not check the hemorrhage. He died at 9 P.M., Feb. 26, 1891.

Post-mortem, held at 9 A.M., Feb. 27, revealed an ulcer situated just at the end of the œsophagus and the beginning of cardiac end of stomach, which had perforated one of the small vessels.

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## *EDITORIAL.*

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### ST. JOHN'S MATERNITY OF SITKA.

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Among the natives of Alaska it is the practice to turn out from her home a woman who is about to become a mother, providing for her only a small, rude shelter of boards, bark or canvas, as a protection from the weather and from public observation. In one of these cheerless, dark and desolate little huts, on the cold, damp ground—covered, perhaps, with a blanket or a primitive carpet of moss or bark—the Alaskan babe is ushered into the world and the mother suffers unattended by skilled nurse or physician. The child is half washed, greased and speedily rolled up in a skin or blanket, which is padded with dried grass or moss. The little papoose thus bandaged is better cared for than the mother, who has even less proper attention, or more that is improper. Little thought is given to “surgical cleanliness,” and the use of antiseptic precautions, of course, is unknown. The chances of accident or disorder, on the mother's part, are much greater than in the case of the infant, although the latter is often short lived. It is not a wonder that a sudden death or serious sickness frequently follows a confinement in one of the out-of-doors “lying-in” booths.

This condition of affairs has aroused the benevolent feelings of some of the citizens of Sitka and stimulated efforts towards providing better shelter and care for the native mothers and children. A plan has been matured and some funds have been obtained for the erection of a building in the native village to be used as a lying-in hospital, and to be known as the St. John's Maternity of Sitka. Any who may be interested in this very deserving charity and wish to help in the undertaking, or to receive further information, may address Dr. Clarence Thwing, formerly of Brooklyn, now at Sitka, Alaska.



### NITRITE OF AMYL IN CHLOROFORM ANÆSTHESIA.

Two recent deaths from chloroform administered for anæsthetic purposes direct attention anew to the various methods of resuscitation when dangerous symptoms appear. Of these methods none seems more promising than that in which nitrite of amyl is used. Dr. F. A. Burrall, of New York, believes that there is an essential antagonism between this drug and chloroform, and in a letter to the *Medical Record* refers to ten instances in which life was doubtless saved by the amyl. He sums up his views in these words: "In deciding upon remedial measures we must depend on both the observations of scientists and the teachings of clinical experience. With such light thrown upon the action of chloroform, let us suppose that a patient who is inhaling chloroform suddenly develops dangerous symptoms. Of such symptoms a tendency to fatal syncope is the most frequent. What conditions are present under such circumstances, and what shall be done to avert a fatal issue? We may hold that the cerebral vessels are contracted, and the central nervous system is losing the blood supply on which its activity depends. Circulation and respiration are faltering and death may occur suddenly at any moment. It is not a time for the application of any one method or remedy, but all the usual aids, as well as the reserves, of science should be immediately employed. The first indications are to revive circulation and respiration, since what arouses one seems to awaken the other. I think that, as nearly simultaneously as possible, the head should be lowered, the neck extended, nitrite of amyl given hypodermically or by inhalation, and artificial respiration practiced by the Sylvester method, since this method is the most convenient. It should not be forgotten that pressure on the abdominal aorta increases the blood-pressure in the carotid. If asphyxia be pres-

ent, it would seem that the neck should be extended and the head raised higher than the feet."

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OBITUARY.

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FORDYCE BARKER, M.D., LL.D.

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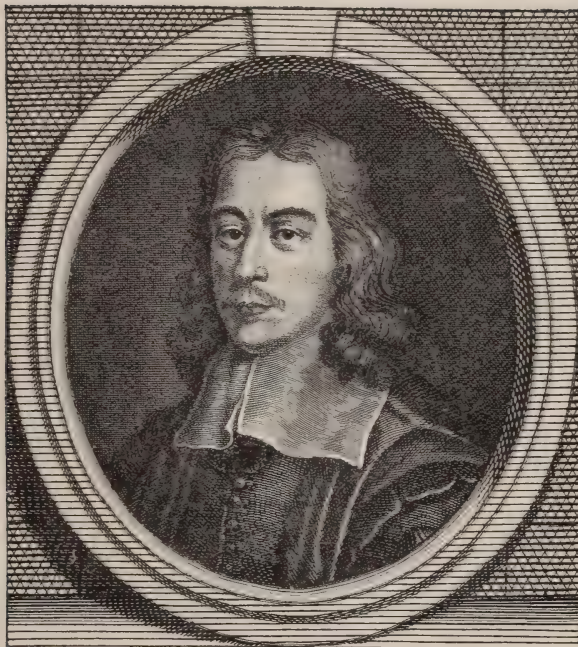
Dr. Barker's death occurred May 30, its cause being apoplexy. He was born at Wilton, Maine, May 2, 1818. He was graduated from Bowdoin College in 1837, and studied medicine with Dr. Henry I. Bowditch and with Dr. Charles H. Stedman at the Chelsea Hospital. Afterward he studied in Edinburgh, and received the degree of M.D. in Paris in 1861. In this country he began the practice of his profession at Norwich, Conn., in the following year. In 1845, when but 27 years of age, he became Professor of Midwifery at the Bowdoin College Medical School. In 1850 he was elected to a similar post in the New York Medical College, and came to this city, where he has since lived. In 1852 he became a member of the staff of Bellevue Hospital, where he remained until 1874. In 1860 he was Professor of Clinical Midwifery and Diseases of Women in Bellevue Hospital Medical College. He was also consulting physician to Bellevue, the Maternity, the Cancer, the Woman's, St. Elizabeth's, and the Children's Hospital. His connection with medical societies both in this country and in Europe was very extensive. His death removes from the ranks of the profession of our sister city its most prominent and beloved member.

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KINGS COUNTY MEDICAL ASSOCIATION.

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The October meeting of this association will be occupied with a paper by Dr. J. C. Biermith, entitled "Quantitative Tests for Urea."



THOMAS WILLIS.

This illustrious English physician and anatomist was born in Wiltshire in 1621. He was educated at Oxford, became one of the first members of the Royal Society, and soon made his name as illustrious by his writings as it was already by his practice.

It was his constant practice to rise very early in the morning and attend divine service before visiting his patients, which he had conducted at an unaccustomed hour in apartments fitted up for the purpose in his house while he lived, and at his death settled a legacy to continue them. He was a liberal benefactor to the poor, having from his early practice allotted part of his profits to charitable uses; regular and exact in all his habits and hours. He was a fellow of the College of Physicians, and refused the honors of knighthood.

We are told by a contemporary that "Willis was a plain man, a man of no carriage, little discourse, complaisance or society, yet for his deep insight, happy researches in natural and experimental philosophy, anatomy and chemistry, for his wonderful success and repute in his practice, the natural smoothness, pure elegance, delightful, unaffected neatness of Latin style, none scarce hath equalled much less outdone him."

His books, which are numerous, show great learning, very little knowledge is to be gained from them, and with the exception of his work on cerebral anatomy, none of them are now referred to.

A recent writer refers to his anatomical work in the following language: "The circumstance which chiefly distinguished the history of anatomy at the beginning of the seventeenth century was the appearance of Thomas Willis, who rendered himself eminent not only by good researches on the brain and nerves, but by many judicious observations on the structure of the lungs, the intestines, the blood-vessels and the glands. His anatomy of the brain and nerves is so minute and elaborate and abounds so much in new information, that the reader is struck by the immense chasm between the vague and meagre observations of his predecessors and the ample and correct descriptions of Willis."

Among other achievements he was the first to give us our present numbering of the cranial nerves; he described the connection of the eighth pair with the nerve which issues from the beginning of the spinal cord. He described the corpora striata and optic thalami, etc. His account of the internal carotids, and the communications which they make with the branches of the basilar artery, forms the circular monument which recalls his memory to every medical student to-day. He died in 1675, and his remains rest in Westminster Abbey.





*PROGRESS IN MEDICINE.*

## SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

## THE RADICAL OPERATION FOR HERNIA IN THE ANTERIOR ABDOMINAL WALL.

Vulpius (*Beitrag fur Chirurgie*, Bd. vii.). V. divides the cases of umbilical hernia studied into the strangulated and non-strangulated variety. Sixty cases of the former are collected from the literature upon the subject, among which are two from the Heidelberg clinic, as well as eight cases of strangulated ventral hernia not to be classed as umbilical.

The high mortality (18.3 per cent.) of the operation in these strangulated cases is not to be attributed to the operation itself; non-strangulated cases furnish invaluable statistics in the study of the subject of operative interference. Seventy-two cases of the non-strangulated class are collected, operated upon in the antiseptic period, and it is noteworthy that among these no fatal cases have occurred. This extraordinary result shows, according to V., how groundless is the fear, usually entertained by surgeons, of attacking this class of cases.

The following conclusions regarding the radical operation in these cases are arrived at: 1st. The operation is indicated as an addendum to an early herniotomy of a strangulated hernia. 2d. In cases in which, whether the hernial mass be reducible or irreducible, decided disturbances to the patient's comfort occur.

The operation itself consists of a ligature and excision of the sac and suture of the ring. A supporting bandage or truss-pad is to be subsequently worn.

## PALLIATIVE OPERATIONS IN CASES OF PROSTATIC HYPERTROPHY.

E. Vignaid (*Ann. des Malad. des Org. Génito-Urin.*, 1890, vol. viii., No. 11). So-called palpation operations in connection with the impossibility of catheterization in some instances of retention arising from this cause are discussed, as well as those in which this is possible though difficult. In addition, the presence of violent cystitis in cases in which the cachectic life has been entered upon, and which defy all ordinary methods of treatment, is discussed in its relation to the necessity for operative interference. Palliative operative procedures consist of puncture of the bladder,

suprapubic cystotomy and the "boutonnière." According to V., it is very rarely necessary to resort to these, but they may be enunciated as follows: 1st. The instances in which catheterization is impossible, and in which it is imperative that the septic urine find prompt and free egress. 2d. In cases in which the difficulties attending the use of the catheter cannot be obviated by the use of the permanent catheter. 3d. In intractable cystitis. In the two first conditions, the old boutonnière operation, or opening the urethra and drawing through.

#### THE TECHNIQUE OF SUTURING IN OPERATIONS UPON THE STOMACH AND INTESTINE.

H. Braun (*Deutsch med. Wochenschrift*, 1891, No. 1). The author asserts that by far the greatest number of fatalities in operations upon the gastro-intestinal tract is due to the inefficiency of the means employed to prevent leakage into the peritoneal cavity. The following modification of the usual method employed by B. for the past six years is brought forward: Those portions of the digestive tract that are to be united to each other or to the abdominal wall are secured to each by a single row of sutures through their serous surfaces. The serous and muscular coverings of each portion are now incised at a slight distance from the first row of sutures, the depth of these incisions corresponding to the sub-mucous cellular tissue. The incised portion of each loop is now made to approximate its fellow and the suturing completed. The object of the incision of the wall of the stomach or intestine is to enable the surgeon to determine the exact depth to which the needle may be passed in order, on the one hand, to avoid penetrating the lumen of the organ, and on the other to secure as firm a hold upon the tissues to be united as possible. In cases in which communication is to be established between two portions of the intestinal tract, or between stomach and intestine (intestinal anastomosis,—gastro-enterorrhaphy), the mucous membrane is incised after placing the above-mentioned sutures in situ, and before tying the same a portion excised if necessary and a separate row of sutures placed therein.

#### THE VALUE OF MASSAGE IN THE TREATMENT OF FRACTURES.

O. Meyer (Review; *Inaugural Dissertation*, Leipzig, 1890; *Centralblatt f. Chirurg.*, No. 14, 1891). M. discusses the fact that only in fractures involving the joints particularly, and most markedly in patella fractures, massage is of value in promoting rapid union. He reports twenty-seven cases of the typical fracture of the radius

treated by massage in Kölliker's polyclinic in Leipzig. Union followed, in recent cases, without restriction of mobility, in a surprisingly short time. Suppuration, which is usually considerably interfered with in this class of cases, was completely restored. Kölliker usually places the arm upon an ulnar splint, and applies, as early as the third day, massage in a mild form, beginning with centripetal stroking, which gradually, every second or third day, is increased to complete massage. Views of surgeons upon the value of such early application of massage are still divided.

#### CAMPHORATED NAPHTHOL IN SURGICAL TUBERCULOSIS.

Jules Reoul (*Thèse de Paris, Centralblatt f. Chirurg., No. 14, 1891*). The author brings forward a new antiseptic made by incorporating 100 parts of beta-naphthol with 200 parts of finely powdered camphor, and then carefully heating until complete melting occurs, for the treatment of tuberculosis of those parts accessible to surgical treatment. This camphorated naphthol is an oily fluid, insoluble in water, but miscible with alcohol, fats, ether and chloroform. It is decomposed by exposure to the air, the camphor evaporating and the naphthol becoming crystallized. Light decolorizes it, but it may be preserved in dark, well-stoppered bottles. It is not a true chemical combination, but is probably only a molecular union. The antiseptic qualities of the new antiseptic depend, to a great extent, upon those of the beta-naphthol. Its antiseptic qualities have been proven by means of culture, as well as by clinical experiments, by R. It has been used with good results as an irrigating fluid in joints, bony cavities, tendonous sheaths, cold abscesses in the pleural and uterine cavities; and in addition to an interstitial injection, by instillation in cases of tuberculosis of the bladder, and in the preparation of dressings and disinfection of instruments. No poisonous symptoms have been observed, although the undiluted fluid was employed.

#### TRAUMATIC PERFORATION OF THE STOMACH AND INTESTINE.

Paul Reclus (*Bull. et Mém. de la Soc. de Chir. de Paris, T. xvi., p. 447*). The author lays stress upon the opium treatment of this class of injuries, without laparotomy, and adds five additional cases of his own to a collection of 91 cases gathered from the literature of the past fifteen years. Of these, 75 per cent. recovered. While he does not renounce laparotomy entirely in this class of cases, the following indications for its performance are laid down:

1. Cases in which the injured loop of intestine is protruding.
2. Those in which the evidences of hæmorrhage, either internal

or internal and external, are present. 3. Where the percussion of the region of the liver, or the introduction of a catheter through the wound reveals the presence of gas in the peritoneal cavity. 4. Cases in which, as for instance from a forcible kick of a horse, extensive laceration is believed to have occurred. 5. Cases in which, in spite of energetic medical treatment (application of ice, large doses of opium) signs of peritonitis occur. This last indication, according to the author, admits of further discussion.

#### THE QUESTION OF PRIMARY RESECTION OF GANGRENOUS INTESTINE.

Krumm (*Beitrage fur klin. Chirurgie*, Bd. vii.). The results of 83 cases of strangulated hernia, in 61 of which herniotomy was found to be necessary, are given by the author, from Czerny's clinic at Heidelberg. Of these latter, 14 ended fatally (23 per cent.). Upon 15 occasions gangrene of the bowel was found to be present. In 9 of these cases the establishment of a preternatural anus was necessary: in 1, simple incision and drainage supplied; in another, excision of the gangrenous portion with lateral suturing was done, and in 4 cases primary circular resection and suturing of the bowel was performed. Four out of the 9 cases in which a preternatural anus was established died, the other 5 making a final recovery. Of the 4 cases in which resection of the bowels was performed, 3 recovered and 1 died. After a careful study of the opinions expressed by writers upon this question, and comparing these with his own views based upon the above cases, the author concludes that resection of the bowel under certain conditions is to be performed, and that the procedure is not to be considered in antagonism to that for the establishing of an artificial anus. The primary resection is indicated in cases of elastic strangulation,—rarely in incarceration or fecal impaction, without symptoms of ileus; while beginning peritonitis, a condition of collapse as well as peritoneal phlegmon, point to the necessity for the operation for artificial anus.

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## OBSTETRICS.

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BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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#### INDICATION FOR AMPUTATION OF THE UTERUS AFTER RUPTURE.

Mermann (*Arch. f. Gyn.*, B. 39, H. 3). The author, as a text for his remarks, cites six cases, which he has collected, of recov-

ery after amputation of the uterus. The precise indications for this method of treatment after uterine rupture cannot as yet be definitely formulated. Leopold, Winckel and others advocate laparotomy in complete rupture and the extrusion of the larger portion of the foetus into the abdominal cavity, on the ground that sepsis cannot be so surely averted by the tampon and drainage, and that serious injury is liable to be done in extraction through the wound. Referring to the views of Piskacek, he thinks his conclusion that more women die after laparotomy is fallacious. It is based on hospital statistics, and hospitals receive a large proportion of unfavorable cases.

Laparotomy affords the only means of arriving at a proper knowledge of the extent and character of the tear. It is impossible otherwise to know whether it has extended far into the parametrium. If the laceration does not involve the peritonæum treatment by drainage will usually suffice, yet a subperitoneal hæmorrhage may be so great as to demand laparotomy.

After the abdomen is opened, M. recommends amputation of the crippled uterus in preference to suture and drainage as affording the best chance for saving life. He thinks amputation especially indicated—

When the tear extends into the broad ligament.

After prolonged labor.

When the foetus has been long dead.

The advantages of this method of treatment are that—

It removes a probable source of infection.

It relieves the lymphatics of the extra work thrown upon them during involution and leaves them free to take care of whatever septic material may be unavoidably left in the peritonæum.

Moreover, after amputation of the uterus lactation ceases and the woman is spared this tax upon her enfeebled vitality.

Hæmostasis is more certain after amputation than by suture, and recovery is easier and more rapid. Amputation leaves no dead spaces requiring to be drained, and with avoidance of contact infection what little antiseptic work is left for the peritonæum to do it will easily accomplish.

The use of gauze drainage through the uterus, in addition to its negative disadvantages, is open to the positive objections that it irritates the peritonæum, lessens its resorptive and digestive power and lowers the *vis resistentiæ* of the whole organism, to say nothing of its acting as a possible means of infection by carrying septic fluids from without inward.

Again, after the conservative method the cicatrix, in case of extensive laceration, may complicate subsequent labors—may even give rise to fresh tears.

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## PREVENTIVE MEDICINE.

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BY E. H. BARTLEY, M. D.,

Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, Long Island College Hospital.

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### SANITATION IN 1890.

In an address delivered before the last meeting of the American Public Health Association, and reported in the "Sanitarian," Dr. H. B. Baker, in reviewing the condition of *sanitation in 1890*, proposes a method which he thinks may, if carried into effect, stamp out inflammations of all kinds. His reasoning is that it is becoming a firm belief among surgeons that nearly all inflammations are caused by microbes; that some of these microbes are widely distributed in thickly inhabited places, while sparsely inhabited regions, and especially mountainous regions, are comparatively free from them; that new States and localities are good health resorts; that a part of this is due to the fact that in thickly settled localities the residences and persons of the inhabitants are infected with the microorganisms; that modern antiseptic surgery is a proof of this theory, and shows that there is no inflammation without these microbes. From these ideas he concludes that all inflammatory diseases might be prevented by preventing the access of the specific microbes to the air of our houses or even of the streets. Then, he adds, we should have "no more consumption, pneumonia, bronchitis, laryngitis, pharyngitis, tonsillitis, rheumatism and other cases, including nearly all the dangerous communicable diseases."

Without elaborating upon the measures to be carried out, he states that among the most important measures would be the disinfection of all sputa, pocket-handkerchiefs and the like; also, that all purulent discharges and all pus which is accessible should be destroyed or disinfected.

In the same address Dr. Baker claims that the State Board of Health of one State (Michigan), by measures started and maintained for the restriction of contagious diseases, saved that State 5,000 per-

sons from death by scarlet fever, 1,500 persons from death by small-pox, and at the rate of one life a day is saved from death by diphtheria. These figures are based upon "statistics which appear to be trustworthy," and upon a comparison of the death rates before and since the establishing of the State Board.

If the statistics are really trustworthy, there is here great cause for gratification in the results achieved.

If such results can be secured in so short a time, one is tempted to regret that it was his misfortune not to have lived in the latter part of the twentieth century.

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## PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,

Professor of Histology and Pathological Anatomy, and Pathologist of the  
Long Island College Hospital.

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### THE EARLY CHANGES IN THE SPINAL CORD IN ACUTE ANTERIOR POLIO- MYELITIS OF THE ADULT.

(*Med. Chronicle*, Sept., 1890.) To the autopsy findings in acute poliomyelitis in adults, of Gimbault, Leyden, Schultze, Drummond, W. adds a new one occurring in a twenty-two-year-old male. The lesions, clinically, were: 1. Right arm. 2. Left arm. 3. Failure of patellar reflex. 4. Lesion of both legs. 5. Rapid atrophy of affected members. No anæsthesia; no lesions of bladder or alimentary canal. Sudden death in about five weeks, no cause for which could be discovered at the autopsy. After hardening, the gray substance of the anterior horns throughout showed infiltration, with round cells in a mass, whose centre gave evidence of degeneration. This was particularly marked in the cervical and lumbar regions, and principally in the outer part of the anterior horns.

In the tissue surrounding the mass of round cells, the arterioles, capillaries and veins were everywhere intensely hyperæmic, and the perivascular lymph spaces were infiltrated with small round cells. This portion contained absolutely no ganglion cells, while those of the median portion of the anterior horn were partly intact, partly shriveled. The nerve fibres were also wanting in the infiltration focus. The anterior root contained only single normal fibres, while the posterior root appeared perfectly normal. Micro-organisms were not found. In the *n. ulnaris* and *n. ischiadicus*, single degenerated fibres were here and there found.

## INFECTION AND TUMOR FORMATION.

Schleich (*Deutsch medicinische Wochenschrift*, 1891, No. 3). S. remarks that infection of the organism never arises from dispersion of aggregations of leucocytes. On the contrary, every tumor is a tissue new-formation, which possesses an analogy to the development of the fecundated egg. Has the vital energy inherent in the cells from the first physiological impregnation been dissipated, so will the cells lose their resistance, and react moreover to all impressions in a manner quite different from usual. Such a weakened cell becomes a pathological "sperma," and impregnates another cell. Both the impregnating and impregnated cells are cells of the tissue from which the tumor itself develops. A cell or pathological "sperma" fructifies; another cell comparable to the ovulum is fructified, and thus begins the tumor, since here, inside the organism, a tissue cell which has become infectious (sperma) infects (impregnates) a second cell. S. regards tumor formation as a kind of endogenous infection. Oestrich remarks, that while this theory has never been disproved, there has certainly never been the slightest demonstration of its truth.

## THE CONDITION OF THE HEART IN ANÆMIA, AND THE CAUSE OF THE PULMONARY MURMUR.

Hanford (*American Journal of the Medical Sciences*, Dec., 1890,). The author finds right cardiac dilatation in a series of cases of anæmia, including chlorotics. The so-called anæmic bruit is most characteristically a systolic murmur, heard best over the art. pulmonalis, in the second left intercostal space, close to the sternum, and while the patient is in a reclining position, becoming indistinct or commonly disappearing in the sitting posture.

The author believes that this bruit does not originate directly from the change in quantity of the blood, but much more from the greater pressure of the weak and dilated heart (in the reclining position) upon the pulmonary artery.

## STUDY OF A CASE OF CIRRHOSIS HEPATIS HYPERTROPHIC.

Luzet (*Arch. de méd. exp.*, 1890, T. ii.). A thirty-four-year-old cook suffered for four years now and again with icterus, pains in epigastrium, vomiting and diarrhœa. For one month vomit and stools are black. Patient came to hospital extremely prostrated, and died in one day. Palpation of the liver revealed it to be enlarged, having on its surface a number of tumors the size of a nut, and



from this, carcinoma ventriculi with hepatic metastasis was diagnosed as highly probable.

Section: Omentum rolled together in the epigastrium and right hypochondrium; stomach dilated; has a normal mucosa. Liver weighs 1,800 grammes. Here and there the liver is covered with light yellow, decidedly elevated growths, from a pin's head to a pea in size, particularly rich on the under surface. On the cut surface are yellowish enlarged lobules, separated by thin connective tissue, in gray or reddish bands.

Histological investigation: (Fixing in Müller's fluid, coloring part with hæmatoxylon, part with picocarmine). The reddish portion originates from connective tissue, in which are found new-formed biliary canals. These are arranged in very small lobules separated by zones of intensely congested capillaries. It appears as if the normal lobules are divided into smaller pathological ones. Liver cells are absent here, and in the portal vessels arteritis, thickening of the portal vein, and obliteration of the gall ducts. In the yellowish regions one sees sclerotic tissue from the portal vessels, stretching along the capillaries to the hepatic vein, the liver cells in between being atrophied and in fatty degeneration. Between these forms of alteration are various stages where the liver cells, already greatly pressed together by connective tissue, are still not entirely gone. The liver cells lose next their fat, are smaller, bright and cubical, give up their functional activity and are transformed into cell capillaries. The great quantity of fat, with retained biliary secretion, and the duration of the disease are unusual. The anatomically similar cases of hypertrophic cirrhosis of the liver run a far swifter course.

AN INTERESTING CASE OF EPITHELIOMA ORIS FOLLOWING A SIMILAR GROWTH ON THE LIP.

Sheppard, J. E. (Brooklyn Eye and Ear Hospital, May, 1891), reports a case occurring in his ear clinic of a woman, æt. 60, Ireland, who twelve years ago had a tumor of lower lip which was purplish in color, sensitive to touch, but not painful, not ulcerated, rather soft. This growth was removed by Dr. Wight, at the Long Island College Hospital, from the space between the mucous membrane of the lower lip and the lower point of the chin. She still carries a visible cicatrix, which is sensitive. Six years ago patient first noticed a small wart-like growth in left concha, which for five years grew very slowly, but for a year past has rapidly increased in size. Never painful, it has occasionally, as a result of picking at it, bled a little, and felt sensitive to the touch. It is now nearly walnut in size, mottled in appearance,

firm, not sensitive, attachment along the posterior outer border of the concha and to the antitragus by a very small attachment (pedicle).

Removed May 1st, '91, (by incision with local spray ether anæsthesia) and base cauterized. May 22d, entirely healed.

The interest in this case lies in the fact, that the clinical history is complete from the time of Dr. Wight's first operation up to the 22d of May, '91, when final and complete healing obtains—a period of twelve years; and further that the neoplasm is found upon microscopical examination to be a flat-cell carcinoma, or nest-cell epithelioma, in which the connective tissue is very abundant, and young cells somewhat scarce.

It is an open question whether the second (oral) tumor be a secondary deposit or an independent growth. These flat-cell carcinomata show far less tendency to generalize than the other varieties of cancer, metastasis is slow, and usually the secondary deposits develop relatively near to the original mass. Here the tissues in immediate environment are unaffected, no glands are enlarged and nothing remains of the first neoplasm save a somewhat sensitive cicatrix; while the second tumor develops six years afterwards at a point far distant from the first, and is evidently—from its attachments and the clinical history of the case after removal (healing)—a superficial growth.

If this patient possesses the inherent tendency to the production of neoplasms, the long intervals between their appearance is unique; if, on the other hand, and which seems more probable, this oral tumor is to be regarded as a true metastatic deposit, the questions how long the metastatic deposit remained too small to be observed, and what caused the relatively sudden lighting up of the growth into active progress, are indeed interesting. So accurate a clinical history for so long a period renders the case exceedingly valuable to the surgeon from a prognostic standpoint, and to the pathologist as a study in the development of malignant neoplasms.

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## DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

### CYSTOMA OF ARYTENOID REGION OF THE LARYNX.

W. E. Casselberry (Journal Amer. Medical Assoc., 1891.) Neoplasms of cystic formation form from 3 to 6 per cent. of laryngeal

growths. Of these nearly all occur on the anterior third of the vocal bands. Only two cases other than the author's have been reported in which position of tumor was clearly defined to be near the posterior extremity of vocal bands.

These cysts, like "mucous retention cysts" of other parts of the body, are occasioned by occlusion of ducts from accumulated epithelial elements or acute inflammation. Such cysts rupture early in growth, or the walls may become sufficiently thick from inflammatory proliferation to resist pressure of accumulation within.

The most notable of author's cases presents the following history:

Patient, a female, 25 years of age. First symptom was hoarseness, which gradually increased to complete aphonia and slight difficulty in deglutition, which at time of operation was so exaggerated that only fluids could be swallowed. No pain observed.

At time of operation, condition as follows: Marked emaciation and debility. The upper part of larynx filled by cystoma four centimeters in diameter. This tumor encroached upon œsophageal opening and epiglottis, forcing latter forward. Vocal bands were hidden from sight. On administration of ether the tension of cervical muscles, which had maintained an opening for respiration, was relaxed and respiration ceased, necessitating tracheotomy and artificial respiration. These were successful in restoring patient. The fluid contents of cyst being removed through hypodermic needle, the collapsed wall was drawn up by curved vulsellum. Attachment was found at arytenoid eminence, adjoining end of ventricular band and ary-epiglottic fold. The cyst wall was removed by galvano-cautery snare and angular scissors.

The microscope showed neoplasm to be a cystoma—possibly a cysto-sarcoma.

In order to avoid a recurrence, the tissue about base attachment was removed, including cartilages of Wrisberg and Santorini. The arytenoid cartilage remains but is partially ankylosed. Voice is good after two years and no recurrence observed.

#### THE PRESENT POSITION OF INTUBATION.

Pitts and Brook (*Lancet*, Jan., 1891). In performing intubation for chronic stenosis—

1. Considerable force may be required.
2. A much larger tube may be necessary than in acute obstruction at same age.
3. Tube may be left in as long as a fortnight if needed.
4. At first pulp food—not fluids—should be administered.

The counter-indications for intubation are—

1. Obstruction caused by foreign bodies.
2. Active ulceration of larynx (syphilitic or tubercular).
3. Neoplasms, especially if malignant.
4. Obstruction due to alterations in shape and position of trachea from goitre or other tumor, or from abscess.

Intubations are indicated in—

1. Simple cicatricial stenosis.
2. Scald, œdema, or acute inflammation of larynx.
3. Sudden spasm, such as may result from giving anæsthetic.
4. In dyspnœa, as a diagnostic aid, to determine if obstruction is in air passage or out of reach, as mediastinal tumor.

In diphtheria this procedure may be used when dyspnœa is most marked symptom. It should then be performed early in disease, and if necessary to retain tube long, then tracheotomy should be substituted. Tracheotomy preferable when marked tendency to extension of membrane, or when disease assumes a malignant form.

#### LIEBREICH'S TREATMENT OF LARYNGEAL TUBERCULOSIS.

Michael (*Jour. Laryn. and Rhinol.*, April, '91). The medication used is cantharidate of soda. This is prepared from the alkaloid of cantharides.

The dose is two to four decimilligrams, and is given by subcutaneous injections in the back. This is the largest effective dose that can be given in safety.

The cantharidate of soda has been used by P. Heymann in 27 cases. Reports made on 17 cases; others not sufficiently long under treatment. Of 17 cases, 10 were tuberculous affections and 7 chronic catarrhal laryngitis. The experiments were made upon outdoor patients who have in no way changed their mode of living. Strangury and hæmaturia have been observed after injections, but in no instance dangerous symptoms. In one case far advanced adynamia progressed more rapidly; in all others voice improved, secretion diminished and condition of lungs improved. Laryngeal examination after injection evidenced increased congestion of larynx. The bacilli coughed out were difficult to stain, and were apparently smaller than before administration of drug.

#### TRICHLORACETIC ACID IN AFFECTIONS OF THROAT AND NOSE.

Gleitzmann (*Medical Record*, March, 1891). This drug was used as cauterant in 200 cases. Merck's preparation was used, Flexible aluminium pads having cavities at distal extremity were used as applications. In pharynx no anæsthetic is necessary; in

nares, 10 per cent solution of cocaine, and in larynx 20 per cent. solutions should be first applied. The eschar resulting is white in color, limited in extent, smooth and dry. It generally drops off in from two to five days. The medicament was used in removing tonsils, both faucial and lingual, hypertrophied follicles of pharynx and in polypoid excrescences. It is too slow a method for value in destroying large masses of tissue and not sufficiently for cartilaginous or osseous spurs from septum.

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## PHYSIOLOGY AND EXPERIMENTAL THERAPEUTICS.

BY GEORGE T. KEMP, M.D., PH.D.

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### THE INFLUENCE OF INTESTINAL ANTISEPSIS ON THE TOLERANCE OF CERTAIN DRUGS.

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In an article entitled "*De l'influence de l'antiseptie intestinale sur la tolérance de quelques médicaments,*" published in the *Comptes Rendus de la Société de Biologie*, 1891, p. 58, M. Ch. Féré points out some interesting facts which he has observed in connection with producing tolerance for large doses of bromide of potassium and of borax by the simultaneous administration of drugs which are known to reach the intestine, and which possess anti-fermentative properties. The observations were made at the *Salpêtrière*, on patients to some of whom were given 15, 16 and 17 grammes (225, 240, 255 grains!) of potassium bromide *per diem*, and these enormous doses were tolerated "without any inconvenience from the standpoint of general health, and with great benefit in the treatment of the convulsions [which, from the context, I infer were epileptic.—K], by administering daily 4 grammes (60 grains) of naphthol and 2 grammes (30 grains) of salicylate of bismuth. These doses of naphthol and salicylate of bismuth were continued for nearly nine months without causing trouble.

In the cases of certain epileptics who were treated with borax, it was noticed that the patients were greatly benefited so far as the epilepsy was concerned, but they suffered from stomach complications, and in some cases were attacked by psoriasis or eczema. These eruptions were noticed when the dose of borax was 2 or 3 grammes (30 or 45 grains) *per diem*, and became very marked on doses of 5 to 7 grammes (75 to 105 grains). In these cases the eruption was made to disappear in a few days by giving 4 grammes of naphthol and 2 grammes of salicylate of bismuth, or by giving

50 centigrammes (8 grains) of betol (Naphthalol. Salicylate of  $\beta$  naphthol). Neither in the case of borax nor of potassium bromide is it necessary to stop these drugs to obtain relief from the symptoms which their excess had produced.

These interesting facts were first published by Féré in a paper entitled "*Bromuration et antiseptie intestinale*" in the *Comptes Rendus de la Société de Biologie*, 1890, p. 512; and again in *Nouv. Iconographie de la Salpêtrière*, 1890, p. 249, and the present paper confirms them by observations on a larger number of cases.

[At the meeting of the Société de Biologie following the one at which the above paper was read it was warmly endorsed by Dr. Galippe (*Comptes Rendus de la Société de Biologie*, 1891, p. 97), who laid special stress on the theory that the disturbances produced by bromide of potash were due to fermentations in the intestinal tract, which were excessive in these cases owing to the change in the fluids of the body due to the absorption of the bromide. He would include stomatitis following mercurial treatment, and certain disturbances observed in morphine habitués, in the same category. Without bacteriological investigations to support this theory, it seems rather gratuitous to assume that excessive fermentation in the intestine is the cause of these symptoms, and that salicylates and naphthol-compounds relieve the symptoms by anti-fermentative action. Our knowledge of the physiological action of salicylic acid is not as exact as could be wished, but what we know of its action on the nervous system would indicate that in large doses it is a depressant to the motor centres, consequently its action would be adjuvant to the bromide in this particular. We also know that large doses of salicylic acid produce profound systemic disturbances, sometimes showing a marked influence on the skin.\*

It may be, therefore, that we have in salicylic acid and its compounds a useful adjuvant to the bromides, adding its action to theirs where it is needed and counteracting its action elsewhere where it does damage. Be the mode of action what it may, the value of the clinical observation that the bromides, and possibly mercury, may be pushed in its action without those untoward effects which now follow their continued use, is apparent to every one; and the fact, if borne out by experience, will be one of the most useful which we possess.—K.]

#### WHERE IS UREA FORMED IN THE BODY?

A new and valuable contribution to this interesting subject has recently been published from Prof. Ludwig's laboratory, in the

\* Rosenburg, *Deutsche medicinische Wochenschrift*, 1886, p. 569.

*Archiv für Anatomie und Physiologie, Physiologische Abtheilung*, 1891, p. 481, under the title of “*Der Harn nach Unterbindung der drei Darmarterien*,” by A. Slosse.†

In small dogs, the cœliac axis and both the superior and inferior mesenteric arteries were ligated and the effect on the urine studied. The animals lived five or six hours after the operation, and died with frequently recurring convulsions and general loss of consciousness.

The secretion of urine was scant and was poor in urea, but always contained hemialbumose (propeptone) in small but distinctly detectable quantities. In four experiments on fasting dogs, quantitative determinations were made of the urea before and after ligating the arteries in question, and in two experiments similar determinations were made of the ammonia in the urine. The mean of the results of these experiments is given as follows :

	BEFORE LIGATION.	AFTER LIGATION.
Quantity of urine per hour.....	9.5 c.c.....	3.8 c.c.
Amount of urea contained.....	6.61%.....	2.47%
Urea secreted per hour.....	.62 grammes.....	.08 grammes.

From these figures it is at once apparent that there is a marked diminution in the amount of urea secreted, which cannot be due to the kidneys, as neither these organs nor their circulation were touched. The results are quite in accord, however, with the later view of Schroeder, that the liver is the seat of the urea formation.

[Moreover, the presence of propeptone in the urine is directly in harmony with the view that the peptones are broken up in the liver into a nitrogenous and a non-nitrogenous part, the latter passing through the stage of amido-compounds and ammonium carbonate to urea. When the liver is not functionally active, peptones which would have been decomposed by the liver get into the kidneys and thence into the urine as such.—K.]

It might have been expected that the urine would have contained an increase of ammonium salts after the ligation if ammonium carbonate is the source of urea in its formation from peptones or other nitrogenous substances; but, as a matter of fact, the amount of ammonia in the urine was much less after the ligation than before, 50 milligrammes per hour being the amount contained before the operation, and 5 milligrammes thereafter. This does not militate against Schroeder’s view, however, as the author points out. He attributes the fact to the involvement of nearly all the abdominal viscera, and thinks some special poison is formed.

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† Reviewed from Salkowski’s abstract in *Centralblatt f. d. med. Wissenschaften*, 1891, p. 146.

[Another explanation which appears plausible suggests itself, and that is, that the ammonium carbonate is simply an intermediate product in the formation of urea from proteids, and that the ammonium carbonate itself is formed in the liver from the proteids as well as urea from ammonium carbonate. The decrease in ammonia would then be readily explained as due to the same cause as the decrease in the urea.—K.]

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## MEDICAL JURISPRUDENCE.

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BY SIDNEY V. LOWELL.

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### MENTAL ANGUISH THROUGH TELEGRAPH COMPANIES.

In the State of North Carolina two cases have recently been decided regarding the liability of telegraph companies for the failure to deliver dispatches, the non-delivery or delay in delivery of which naturally caused great anxiety to the persons involved.

In one case the step-father of the plaintiff's wife, one J. T. Young, at Greenville, South Carolina, where the wife was visiting, delivered to the Western Union Telegraph Company a telegram requesting the former to come in haste; that his wife was at the point of death. The dispatch was not delivered. The wife died and was buried without the husband having any knowledge of either her death or burial. If the dispatch had been delivered, as it easily might have been, the same day it was sent, the husband could have been with his wife before her death. He did not receive the telegram until after he had heard by letter, some ten days after the dispatch was sent, of his wife's demise; then only when he went to the telegraph office and demanded it.

The husband brought suit against the company for damages, on the ground that by the negligence of the latter, he had suffered mental anguish and grief by reason of his not being able to be present with his wife during her illness and to attend her funeral. The case came up upon a demurrer to the complaint, interposed by the company on the alleged ground that it did not state a cause of action.

Upon the question which would naturally first arise—Can the person to whom a telegram is sent by another not his agent maintain an action against the company for negligence?—there has been much legal discussion. It is a question having obviously two sides. In England it has been held that the receiver cannot maintain such an action. In this country, however, the decisions of the courts have been invariably the other way. It has been so decided in New York, Tennessee, Massachusetts, Pennsylvania, Missouri and elsewhere. The court therefore held that the husband could maintain an action.



While the difficulty of measuring damages to the feelings is very great in such a case (this the court remarks), still the admeasurement is submitted to the jury in many other instances where it must also be impossible to lay down any absolute rule for damages.

While the case was one of first impression in that State, the court agreed with the reasoning in such cases in other States, that the question was one fairly to be submitted to a jury, for them to award damages.

It is rather singular that within a year, as stated in the opinion, like cases had arisen in Indiana and Texas. These were disposed of in the same way.

In the other case to which I referred, the telegram was sent by a wife to her husband, who was also the suitor. She was about to be confined. She was then staying at Danville, Virginia. She sent a telegram to her husband at Milton, N. C., through her son, to this effect: "Father, come at once. Mother is sick." There was a delay in delivering the message of twenty-four hours or more. During this time the expected child was born (dead). The wife, the husband complained, had suffered greater pain physically and mentally than if he had reached home in time, as he would have done had the message been delivered with reasonable promptness. The case was tried before a judge and jury, to the latter of whom the case was submitted, who rendered a verdict for the plaintiff.

In this case, however, the trial court had held that special damage must be shown as regards mental suffering and mental anguish. The appellate court held on the strength of the Young case, above recited, that this limitation need not have been made. The verdict of the jury was affirmed.

These cases in out-of-the-way States, as they sometimes appear to many, are often very valuable to us in this State. For instance, the liability of a telegraph company under similar circumstances, would in all probability be likewise enforced here. The cases are well reasoned, and logic is logic everywhere. It is fair to suppose that one reason why these cases have arisen and been fought out in North Carolina, Texas and Indiana—the West and South—is because the telegraphic service there is probably less perfect than here, and the reason is that in the less thickly settled districts there is a much greater appeal to the courts in matters relating to personal rights, or claims not involving large amounts of money, than in the great cities. It is well, perhaps, that it is so.

There is many a village Hampden fighting questions manfully that affect the public all over the rural districts of the country that would never be contested in the cities.

In cases like the ones referred to, the practitioners of medicine everywhere will be the first to welcome decisions the innate justice of which they have seen from the needless pain given to those in their care by the cruel delays of telegraph companies in the delivery of messages.

## NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.

**INTERNATIONAL CLINICS.** A Quarterly Collection of Clinical Lectures on Medicine, Surgery, Gynæcology, Pediatrics, Neurology, Dermatology, Laryngology, Ophthalmology and Otology. By Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain and Canada. Edited by John M. Keating, M.D., and J. P. Crozer Griffith, M.D., Philadelphia; J. Mitchell Bruce, M.D., F.R.C.P.; David W. Finlay, M.D., F.R.C.P., London. Illustrated. Price per volume, Cloth, \$2.75; Half Leather, \$3.00. Philadelphia: J. B. Lippincott Company, Publishers.

The above title tells in a very concise form the object for which these volumes are to be published. The idea is certainly an excellent one. If carried out as we presume it will be, it should meet with a warm and generous reception by the profession.

In the list of promised contributors to the Clinics we find the names of the following Brooklyn physicians: A. J. C. Skene, L. S. Pilcher, Charles Jewett and J. C. Shaw.

The first volume has just appeared and contains in three hundred and fifty-seven pages thirty-five clinical lectures on various subjects in Medicine, Surgery, Gynæcology, Obstetrics, Pediatrics, Neurology, Laryngology, Dermatology, Ophthalmology and Otology.

**THE POCKET MATERIA MEDICA AND THERAPEUTICS.** A *Résumé* of the Action and Doses of all Official and Non-Official Drugs now in common use. By C. Henri Leonard, A.M., M.D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. 12mo. c., pp. 300. Price, postpaid, \$1.00. Detroit: The Illustrated Medical Journal Company, Publishers.

The author of this little volume claims to have incorporated in it everything of merit, whether official or non-official, that could be found either in standard works or in many manufacturers' catalogues. The scheme embraces the Pronunciation, Official or Non-Official indication (shown by an \*), Genitive Case-Ending, Common Name, Dose and Metric Dose. Then the Synonyms, English, French and German. *If a Plant* the Part Used, Habitat, Natural Order and Description of Plant and Flowers, with its Alkaloids, if any. *If a Mineral*, its Chemical Symbol, Atomic Weight, looks, taste, and how found, and its peculiarities. Then the Action and Uses of the Drug, its Antagonists, Incompatibles, Synergists and Antidotes. Then follow its Official and Non-Official preparations, with their Medium and Maximum Doses, based, so far as possible, upon the last U. S. Dispensatory.

It is remarkable that the author has been able to put so much material in so small a compass. While the book cannot take the place of the larger treatise, it will serve a useful purpose in giving to the practitioner a reference book in which he can find in a few words the essence of the *Materia Medica*.

**KOCH'S REMEDY IN RELATION SPECIALLY TO THROAT CONSUMPTION.** By Leunne Browne, F.R.C.P. Illustrated by thirty-one cases and fifty original engraving and diagrams. Pp. 114. Philadelphia: Lea Brothers & Co., 1891.

The author believes that not only is the larynx the most appropriate place for the study of true tubercle, but that it is also the most appropriate and convenient site for accurate observation of the various stages of its development towards reparation which takes place under Koch's treatment. He thinks it must be admitted that the results already obtained by Koch's remedy in throat consumption are such as to warrant us to persevere in its employment, provided always that due caution be exercised, not only in the selection of patients for its application, but also in every detail of its administration.





THOMAS SYDENHAM.

Sydenham, Thomas, M.D., a distinguished physician of the seventeenth century, and sometimes called the English Hippocrates, was born in 1624, at Windford Eagle, Dorsetshire, where his ancestors had been settled for many generations. Nothing whatever is known of the history of his boyhood, though it may be concluded from the condition of his family that his early education was not wholly neglected; but we find that in 1642, at the age of eighteen, he entered Oxford as a commoner of Magdalen Hall. His stay, there, however, could not have been of long duration, for he shortly afterward, probably in that very year, joined the army of the parliament, in which two of his brothers were then serving. How long Thomas Sydenham, who is only known to posterity as the most eminent physician of his time, continued to act as a soldier, or what exploits he performed in that capacity, are points which it is impossible now to ascertain, but he himself speaks of his military career as having extended to several years, *aliquot annos*; and Sir Richard Blackmore described him as a "disbanded officer who entered upon the study of medicine for a maintenance and without any preparatory learning." He seems to have re-entered Oxford in 1646, where he acquired a fellowship in All Souls, and he graduated there in 1648, as M.B. (Bachelor of Medicine). When he settled in London is unknown, but he was certainly there before 1661, as he describes the epidemics of that year. In 1663 he became a licentiate of the College of Physicians, and in 1666 he published his first medical work, which he entitled *Methodus Curandi Febres*. In 1676 he took the degree of M.D. (Doctor of Medicine) at Cambridge, though not otherwise connected with that university, and in this year the first edition of his *Observationes Medicæ* appeared. In 1680 the first edition of the *Epistolæ Responsariæ* was published, and in 1686 the *Tractatus de Podagra et Hydrope*; and in 1685, the collected edition of his works known as the *Opera Universa*. Sydenham had been long afflicted by gout, which at length undermined his constitution, and he died of that distemper, combined with other maladies, at London, on the 29th of December, 1689, in the sixty-fifth year of his age.



On examination, I found the abdomen very tender to the touch, the vagina swollen and painful. The os uteri was well dilated and the presenting part resting at the superior strait, which I could barely reach with the examining finger. I could feel a body that seemed to be the scrotum, only about twice its normal size.

Anteriorly to this was an opening into which I introduced my finger and which I took to be the anus. On sweeping the finger to either side I could feel a bony structure which I mistook to be the tuberosities of the ischium. Without further examination, I made a diagnosis of breech presentation, and waited for labor to progress and terminate normally.

After waiting some time, I found that no progress was being made, though the labor pains were strong and regular. I decided that something was wrong and that interference was necessary. Dr. T. D. Lyons was called to assist me.

On attempting to make a more thorough examination, it gave the patient so much pain we were obliged to administer an anæsthetic. On making an examination by passing the hand high up into the vagina, to my surprise an ear was felt, and we decided we had a head presentation, with some deformity. I applied the forceps, soon delivered an anencephalic fœtus, apparently lifeless, and no pains were taken to resuscitate it. After a time it began to breathe irregularly and feebly, and lived some eight hours, when it died in convulsions.

I was permitted to make an examination of the head, and found an entire absence of the parietal and upper portion of the frontal and temporal bones. There was a folding in and forward of the occipital bone, overlapping the petrous portion of the temporal, leaving an opening about the size of the foramen magnum; anterior to this was a body resembling very much a miniature cerebrum, which I had mistaken for the scrotum. This mass was devoid of the cutaneous covering only at its edges. It had a thin, fibrous membrane, resembling somewhat the dura mater; beneath this the mass was made up of connective tissue and blood-vessels and was devoid of brain tissue. There were two cavities corresponding to the lateral ventricles, and a common canal leading from these into the occipital vault. The cerebellum was rudely developed and contained some brain tissue.

The body of the fœtus was large and well developed. The face was broad, but was well proportioned. The digestive functions were shown to be active by urine and fœcal evacuations occurring.

An interesting question arises here—that of maternal impressions.

On recovering from the anæsthesia, the first question asked by the mother was, "Is the child's head all right?"

This led me to inquire into the case, and I learned that when between one and two months pregnant, the mother while walking the street, on passing a shoe store where two boys were throwing the stuffed skin of an alligator at each other, was struck on the breast, frightening her, causing her to nearly faint. So strong was the impression that it caused her no little anxiety, and frequently referring to it, feared her child's head would be deformed. The mother happily is in ignorance of giving birth to the monstrosity. It was buried without her having seen it.

There has been a popular belief, from time immemorial, that impressions made upon the mind of a pregnant woman caused defects in the child with which she was pregnant.

In the well-known instance in Holy Writ there seems to have been no expectation on Jacob's part that the Almighty would interfere directly to cause the flocks of Laban to bring forth young "ring-streaked, speckled and spotted;" but the device to which Jacob resorted is mentioned in such a way as to show a belief in maternal impressions at that time.

It is only comparatively recently, as the present age of skepticism approached and thinking men came to doubt the truth of those things they could not understand, that the power of maternal impressions began to be questioned.

There are three questions I should like to ask:

1st. Do maternal impressions bear a causative relation to foetal defects?

2d. If so, how do such impressions act in producing the defect?

3d. At what period of pregnancy and what kind of impressions are most likely to produce defects?

#### DISCUSSION :

In the discussion which followed, Dr. Emil Mayer said:

I am interested in these cases of acephalus, because one happened in my practice and was published in 1882. In these cases, during labor, it is a common error to believe we have a breech presentation. In my case; there was an absence of the frontal and parietal bones. Only a small portion of the occipital bone was present. Not a trace of cerebral tissue was present, even on microscopical examination. The child did not breathe after birth. About half an hour before the beginning of labor the child made a *very* vigorous movement. This I believe to have been a convulsion. The woman claimed to have visited a museum and seen there a

monstrosity without a brain. I doubt the influence of so-called maternal impressions. It is customary for nearly every woman to make inquiries soon after the birth of the child "if it is marked." I prefer to think the absence of brain and similar deformities found in the child at birth are due to disease of some kind in utero. There is reason to believe that the foetus does have diseases similar to those found subsequent to birth.

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### GONORRHŒAL IRIDO-CHOROIDITIS—SARCOMA OF ORBIT —TREPHING OF THE MASTOID.

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BY E. FRIDENBERG, M.D.

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Patients presented before the Harlem Medical Association, May 6, 1891.

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The patient, a young man of 19, had always enjoyed good health until he contracted gonorrhœa in February, 1890. Two weeks later the left ankle-joint became swollen and painful, and soon after the right knee joint became similarly affected. The urethral discharge ceased about April 1st; the arthritis was not cured until the middle of May.

He consulted me on December 7, 1890, having contracted gonorrhœa two weeks before, and complaining of redness, pain and rapid diminution of sight in the right eye.

Stat. præ: Right eye: Much ciliary injection; no chemosis; cornea steamy throughout; iris discolored, of a muddy, greenish-yellow hue, covered with a shining grayish membrane; pupil of medium size (patient had been instilling atropine); pupillary margin of iris everywhere adherent to anterior capsule of lens; no reflex from fundus; pressure on ciliary region hardly at all painful; V = movements of hand at 6'. Left eye normal.

Ordered locally iced applications night and day.

Atropine 3%, gtt. ii., every two hours. Internally, corrosive sublimate, gr.  $\frac{1}{64}$  every hour.

December 11th. Cornea more infiltrated; pupil fully dilated; iris much discolored; reflex from fundus reddish-brown; V =  $\frac{20}{200}$ '.

December 14th. Family physician, Dr. J. A. Ferguson, reports swelling and pain in left tibio-tarsal articulation.

Visited patient December 15th. Cornea more infiltrated; iris widely dilated, barely visible; no reflex from fundus; V = fingers at 6'.



December 18th. Arthritis persists; cornea densely infiltrated; flocculent yellow exudation in anterior chamber; iris barely visible; V = 0. Continue atropine and ice.

Ordered calomel, gr. i., suspended in glycerine and water, to be injected into right temple. This injection was repeated several times, at intervals of three to four days. The cornea cleared up rapidly, the exudation in the anterior chamber melted away, but the vitreous was now seen infiltrated with a similar yellowish exudation, which disappeared very slowly, leaving permanent fixed floating opacities. The right knee, right wrist, both elbow-joints, and the first phalangeal articulation of the left thumb were successively affected with swelling and pain, the patient recovering very slowly and still limping a little at the present time.

While gonorrhœal iritis is of comparatively frequent occurrence, irido-choroiditis is rare. I have been able to find only one published case, that of Dr. H. Knapp, in which gonorrhœa is mentioned as being present, but is not directly noted as an etiological factor. In conversation with colleagues of my own specialty, I find, however, that irido-choroiditis of gonorrhœal origin has been occasionally observed. The point of special interest is that the prognosis of the iritis is usually good, perfect sight being regained in the majority of cases, while in irido-choroiditis a notable decrease of vision is to be apprehended, my patient, being only able to count fingers at sixteen feet.

#### SARCOMA OF THE ORBIT.

Two years ago I removed from the left orbit of this patient a sarcoma of the lachrymal gland. The gland was removed in its capsule and there was apparently no extension of the new growth to adjacent structures. He remained in perfect health until about six months ago, when the eye commenced to water slightly in bright light and he became unable to read continuously unless the left eye was covered. Three months ago he noticed a slight protrusion of the left eye, and has since felt occasional darting pains in left forehead.

Stat. præsens. Right eye, normal; V. =  $\frac{20}{200}$ . Left eye, V. =  $\frac{20}{100}$ , with + 0.75 spt. = + 1.00 cyl. ax.  $90^{\circ} \frac{20}{30}$ . Fundus, normal.

Left eye is protruded forward about 14 mm., and a trifle downward. Mobility is impaired equally in all directions to about two-thirds of the normal; the ocular movements cause no pain. The outer two-thirds of the upper orbital margin, and the upper half of the outer orbital margin are extremely tender on pressure between the bone and the eye-ball, and just at the center of the outer orbital

margin a spur-shaped swelling, rather hard and sensitive to touch, can be felt, apparently arising from the bone. Pressure on the eye-ball directly backward causes pain.

The history of the case and the symptoms point unmistakably to the diagnosis of Sarcoma of the Orbit.

In view of the severity and dangers of the only treatment hitherto possible—complete evisceration of the orbit—I resolved to try the internal exhibition of methyl blue, which has been recently brought forward by several observers as a palliative, perhaps a curer, of malignant neoplasms. Since April 1st, the patient has been taking methyl blue; at first 0.1 t. i. d., in pill; since April 19th, 0.2 in pill, morning and night. Under this treatment, the spontaneous pain and pain on pressure have diminished slightly, but the protrusion has not changed materially. I shall use the remedy for a few weeks more, and if no decided improvement is then to be observed, will remove the eye and the contents of the orbit.

Dr. Fridenberg presented specimens of the patient's urine, which were of a light blue color, and referred to the experiments of Dr. Max Einhorn, who has shown that the internal use of methyl blue tinges the urine and renders it aseptic.

#### TREPHINING OF THE MASTOID.

The patient, a young man of 25, was treated for acute suppurative otitis media of the right side, with slight tenderness of the mastoid, nine months ago. The discharge ceased, the perforation in the drum membrane closed, but two or three relapses occurred, lasting a couple of days each, during which the perforation opened spontaneously or had to be opened with the knife, and the mastoid remained permanently tender on pressure at its apex. Of late severe pains have been felt at the vertex, and the tenderness of the mastoid increased. Counter-irritation and ice-bags, treatment of nasopharynx and inflation through the Eustachian catheter, as well as internal medication not relieving the symptoms, the mastoid was opened with chisels two weeks ago. The bone was found exceedingly hyperæmic and dense; no pus or granulation tissue. The antrum was opened. Immediately after the operation the pain of the vertex disappeared, not to return again, and the patient's symptoms were completely relieved.

#### DISCUSSION OF CASE OF GONORRHOËAL IRIDO-CHOROIDITIS.

Dr. G. H. Cocks.—I have been unable to find any literature bearing on this subject. It is my opinion the sight is very good under the circumstances.

Dr. VAN SANTVOORD.—Do many cases develop panophthalmitis?

Dr. FRIDENBERG.—I cannot state positively what proportion develop panophthalmitis, but there is a tendency to produce pus, and the case under discussion gave fear of that condition supervening. Pus has been found in the joints, and the disease is very obstinate to treatment.

Dr. VAN SANTVOORD.—I had a case under treatment for six weeks and there appeared to be pus in the knee joint. There was a history of gonorrhœa. The patient made a good recovery with a stiff joint. The literature on the subject teaches us that pus is rarely found in affected joints following gonorrhœa. It may be a question if this condition is not due to a temporary pyæmia.

Dr. FRIDENBERG.—It is difficult to state just when pyæmia begins in these joint affections. It is interesting to know that in the patient I present the eye symptoms developed before the joints were involved.

#### DISCUSSION OF CASE OF ORBITAL SARCOMA.

Dr. G. H. COCKS.—I would call attention to the case which was reported some time ago in this Association, which was operated on by the late Dr. D. C. Cocks. The osteo-sarcoma occurred in the orbit of a girl of 5 years and was carefully removed. It returned after a few months, and then the entire contents of the orbit were removed. Even the periosteum down to the apex was removed by the dental engine. Some months after the child developed what appeared to be pneumonia and died. There were some features which made the diagnosis of pneumonia doubtful, and it was thought the sarcoma may have developed in the lungs, but no autopsy could be obtained to clear up the doubt.

Dr. VAN SANTVOORD.—Late reports claim that methyl blue administered hypodermically does not stain the nucleus of living cells in the same manner as it does dead cells.

Dr. E. L. COCKS.—I would not wait much longer before operating on Dr. Fridenberg's case. I think delay unwise. A case came under my notice which was operated on by Dr. Noyes nearly two years ago. There is as yet no return of the disease.

#### DISCUSSION OF CASE OF MASTOID DISEASE.

Dr. G. H. COCKS.—I saw a case recently with Dr. Carman which gave some interesting features. Male, 23 years, suffered from la grippe, followed by otitis media. Soon after discharge ceased mastoid disease developed. The swelling and œdema were very great, but no fluctuation was discovered. It was thought best to

try palliative measures before operating, and leeches were employed, with very hot poultices. The symptoms subsided and the patient made a very good recovery—the hearing is now perfect. It may yet be necessary to operate at some future time.

Dr. VAN SANTVOORD.—My patient suffering from mastoid disease, operated on by Dr. Fridenberg two years ago, still suffers from severe pain at times. Worry usually aggravates the pain. I have thought there was some pachymeningitis present. I would like to inquire what pathological conditions are found post-mortem?

Dr. FRIDENBERG.—In answer to Dr. Van Santvoord, I would say that in the majority of cases the patients are relieved of all their symptoms by the operation, or they die of meningitis, sinus-phlebitis, or pyæmia. In the case of Dr. Van Santvoord's patient, the existence of a slight circumscribed pachymeningitis is most probable. The patient was a lady who had suffered with pain in the right ear and diminution of hearing. Some weeks after the pain in the ear had ceased, the mastoid became tender and swollen. When I first saw the case, I found an intact drumhead, but the air douche elicited bubbling in the drum, and a careful history brought out the fact that pus had passed through the Eustachian tube into the pharynx; *i.e.*, that there had been an acute suppurative middle-ear inflammation, without perforation of the drumhead. Empyæma of the mastoid was diagnosed and surgical opening of the mastoid cells was proposed. Counter-irritation and ice applications having been employed for some days, with temporary benefit only, I proceeded to chisel open the mastoid process, with the assistance of Dr. Van Santvoord and Dr. Maupin, finding the cortex very thin and a large abscess in the process, at the bottom of which the lateral sinus lay perfectly bare, its bony wall having been destroyed, the opening being of the size of a split pea. The patient was practically cured of her symptoms by the operation. Procrastination would have undoubtedly led to sinus-phlebitis or perforation of the sinus, with death from pyæmia or from hemorrhage. As the membranous wall of the sinus, *i.e.*, a fold of the dura mater, had been long exposed to the action of pus, the persistence of a pachymeningitis is not difficult of explanation.

## ERYSIPELAS.

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BY GEORGE D. BARNEY, M.D.

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Read before the L. I. Medical Society, May 21, 1891.

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Erysipelatous dermatitis requires no introduction to the medical profession, and I may safely say that a year never passes but numerous contributions are made to the literature of the same, and in bringing forward a new measure of treatment, each author usually deplors the want of success which has attended previous methods, and expresses satisfaction, that his own special process has been attended with great good.

In speaking of its etiology, we may say that it is no longer considered doubtful; the streptococcus of Fehleisen, a micro-organism morphologically identical with the pus streptococcus, which it otherwise greatly resembles, is now everywhere regarded as the single and invariable causative agent of the disease.

In the light of our existing knowledge, it may be said, that it is a local disease with marked constitutional symptoms, always arises from without, is always produced by the introduction of the streptococcus of Fehleisen through some wound, however slight, of the integuments. The germ has no power of penetrating healthy skin, but may effect an entrance through an abrasion and perhaps also through scar-tissue, and that when once planted in favorable soil erysipelas rapidly supervenes, the local symptoms probably being brought about through the germ itself, the constitutional resulting from the produced ptomaines.

Through Fehleisen's experiment the nature of the disease has been established for all time. He not only isolated and cultivated the microbe, but, by inoculation of the cultures, produced in animals and in man unmistakable erysipelas.

During the past year a very considerable amount of literature on this important subject has been published; but, with the exception of a single author, the chain-forming coccus of Fehleisen as an etiological factor has remained unassailed. The exception referred to is an article by Prof. Thiry, published in *La Presse Médicale*, No. 35, 1889. In this paper the author denies the invariable importance of the microbe in the disease, he divides the disease into various forms with as many causes, and gives to the strepto-

coccus only a limited power in some cases of what he calls specific erysipelas. The paper is written from a clinical rather than a pathological standpoint, and does not depend upon experimental work. Although the disease does not present clinically various types, the fact remains that the streptococcus is always easily found when looked for in the lymphatic vessels or spaces of the affected skin area and can be readily cultivated, and will produce when inoculated into healthy animals or man the identical disease.

In view of the above fact, it would seem that Prof. Thiry in his article hardly offers enough weight in his argument to induce us to champion his cause against the accepted etiology of erysipelas. Indeed, as a matter of fact, the streptococcus seems not only essential to all cases of erysipelas proper, but also to some conditions heretofore regarded as distinct by many writers. For, according to Vernueil and Clado, in an article published in *La Semaine Médicale*, April 17, 1889, "the same germ is found in all cases of acute lymphangitis," from which they conclude, apparently with reason, that the disease should no longer be considered as distinct, but rather that acute lymphangitis is only another form of erysipelas to which it has been clinically so long related.

The probable action of the so-called phagocytes in resisting and overcoming the erysipelas coccus is somewhat interesting, and, although little is definitely known as to the manner in which these cells resist bacterial invasion of the tissues, Dr. B. K. Rachford, in an article published in the *Cincinnati Lancet Clinic*, June 1, 1889, states that Metschnikoff has found that "in fatal cases of erysipelas the cocci are never found in the cells, but always free in the connective tissue and lymph spaces, while the phagocytes themselves, especially in gangrenous parts, were found surrounded by cocci and completely destroyed. On the other hand, in non-fatal cases the cocci were found within the phagocytes, either as chains, as single cells, or as fragments." The chains and single cocci were found for the most part in the leucocytes, and the granular fragments in the connective tissue cells; and Metschnikoff concludes that the leucocytes kill the cocci while the connective-tissue cells remove them after death.

Baumgarten and others, in opposition to this theory, that the fight between the phagocytes and microbes occurs within the body of the former, say that the phagocytes have nothing to do with the destruction of the bacteria, and that the only part they play in the process is in taking up and disposing of the dead after they have been destroyed. They cite the fact that in anthrax and

other diseases the bacteria are known to die outside of the cells, and think it is so in erysipelas.

Dr. Rachford reviews the whole subject in the following conclusions:

1. There is an uncompromising warfare waged by the cellular elements of the body (including the phagocytes) against the streptococcus of erysipelas.

2. The destructive influence of the parasites is exerted chiefly, if not exclusively, through the agency of ptomaines.

3. The contest between the cocci and the cells occurs outside, not inside, the protoplasm of the cells.

4. When the cells kill the cocci, the phagocytes dispose of the dead. When the cocci kill the cells, they feast upon their dead.

The same author discusses the question as to whether one attack of erysipelas confers immunity, and himself formulates the following law:

“All self-limited parasitic diseases confer immunity, and the length of this period of immunity will be in direct proportion to the severity of the constitutional symptoms of the attack which conferred the immunity.”

Therefore, according to the severity of the constitutional symptoms, one attack will protect against another attack in the same person.

In speaking of recurrent erysipelas, I favor Dr. Tiffany, of Baltimore, Md., who thinks in some cases the so-called recurrent erysipelas may result from the streptococcus which may exist dormant in the body after an attack, and when conditions favor development erysipelas rapidly supervenes. There are few, however, who believe in immunity. Most of the writers on this subject do not favor the idea of protection against successive attacks, and many are of the opinion that a predisposition is excited by an attack of the disease.

Dr. Whittaker says that many of the so-called cases of habitual erysipelas are not erysipelas at all, but rather “mere erythemas,” simple dermatitis, carbuncles, drug eruptions, etc.

In speaking of treatment:

Erysipelas is a disease with a great disposition to undergo spontaneous cure in a comparatively short period of time; under such circumstances the expectant treatment may claim advantage. In graver cases it has not yet been shown that any of the much-vaunted, perfect methods of treating the disease have had notable effect upon its progress.

After reading the published reports on the action of many of the so-called specifics, both local and general, it is easy to persuade one's self that in many cases the disease might have done equally well under no kind of treatment whatever.

The idea of bringing the erysipelas coccus from its home in the skin lymphatics into direct contact with some germicidal fluid is, of course, one of the results of antiseptic surgery. To Kraske belongs the credit of first establishing this method of treatment, although, as now modified by Riedel and Lauenstein, it has more followers and is attended with better results. These surgeons make numerous incisions in the healthy skin some two inches off the border line of the disease to prevent possible infection of aseptic tissues. After the operation, which is done under rigid antiseptis, the wound is kept for several days constantly in contact with sublimate solution 1 in 2000. Let me here say that the incisions made should be deep enough to reach the lymphatics. It is not necessary to draw blood.

There are some objections to Kraske's method:

1. The anæsthetic to be used.
2. The alarm created, which may often cause the patient or friends to refuse operative interference altogether.
3. The unfavorable location of the disease.

In fact I may here say that in my opinion this method (Kraske's) should be the last resort.

I have been pleased with results obtained from the following treatment, and will cite two cases:

1. Mr. R., aged twenty-seven, by occupation a clerk, during the evening of January 2, 1891, was seized with a severe chill, violent headache, pains about the neck. I called the following morning and found the pulse 119, weak, temperature 103° F., bowels constipated, tongue dry and coated, no desire for food and marked mental confusion, the entire left side of the neck and face involved in a typical area of erysipelas, and from what I could learn, was spreading at a very rapid rate. He was given

℞ Hydrarg. Chl. mite. ....gr. ix.  
 Pulv. Ipecac. ....gr. ss.  
 Sodii Bicarb. ....gr. vi.  
 M. ft. pulv. No. ii.

Sig. One at once, and the second the following evening.

Also—

℞ Tinct. Aconiti rad .....gtts. xv.  
 Tinct. Gentian. Comp .....℥ iv.  
 Glycerin. ....℥ i.  
 Aquæ ad q. s. ....℥ iii.



M. Sig. ʒ i. every half hour.

and

℞ Tinct. Ferri Chl. .... ʒ iv.

Aquæ. .... ʒ iii.

M. Sig. ʒ i. every two hours.

The following was applied on solf. lint and kept damp:

℞ Plumbi Subacet. .... ʒ iv.

Tinct. Opii. .... ʒ ii.

Aquæ. .... O i.

M. ft. Lotio.

Sig. External use on lint as directed.

Diet.—Beef tea and toast.

Hygiene.—Free ventilation of room morning and afternoon.

Leaving the patient under the above treatment for the day, I called about 8.30 in the evening and found him resting easier, the face was very much swollen—so much so, that he was unable to use his left eye. Pulse 100 and weak; temperature 101° F. Bowels had moved twice during the afternoon. Treatment was continued. Sulfonal (Bayer) grains x. was administered about 11 P.M.

On the morning of January 3d visited my patient and found him improving, the swelling about neck and face had gone down considerably. Pulse 92. Temperature 99° F. Bowels had moved twice freely during the early morning. No headache, and appetite good.

I diminished the iron, withdrew hydrarg. chl. mite and aconite.

He complained of the area itching and a very weak sol. of carbolic acid was ordered.

The area was freely sponged every three hours with a sol. of bichloride.

On the morning of the 4th found him still improving, the swelling about the neck and face rapidly diminishing. Appetite good. Pulse normal. Temperature normal. Discharged.

Patient No. 2: Master Y., a boy about seventeen years old. During the evening of March 5th he was seized with a severe chill lasting about thirty minutes. I saw him about midnight and found the pulse 130, weak, temperature 104.2°, tongue dry and coated, bowels constipated, severe headache, dull pains about the lumbar region and down the right thigh.

The good mother, fearing an attack of pneumonia, had prepared poultices and applied them to his chest. Hot mustard foot baths and Spanish saffron tea were being faithfully administered when I called.

The symptoms of pneumonia not being present, it was discarded.

Upon examination I found an area of typical erysipelas on the anterior aspect of the right thigh, and about the size of a hen's egg.

He was given two powders of hydrarg. chl. mite gr. ix., pulv. ipecac gr. ss. and sodii bicarb. gr. vi. Sig. one at once and the second the following evening. Tinct. aconite half minim doses every half hour. Tinct. ferri chl. x. minims every three hours and locally. Lotio plumbi subacet. applied on lint, the sol. bichloridi being substituted on the second day, and, to allay itching, a weak sol. of carbolic acid.

Diet was limited to beef tea and toast.

Hygiene—Free ventilation morning and afternoon.

On the following morning found the pulse 107, weak. Temperature 101° F. Bowels had moved three times freely. Treatment was continued, and the evening of the same day pulse was 104, temperature 100 $\frac{1}{2}$ ° F.

Not being able to rest during the night, Sulfonal Bayer 10 grains was administered. The aconite was diminished.

On the morning of the 7th he was rapidly improving; the area had discontinued to spread. Pulse 90. Temperature 99° F. Bowels regular, appetite improved. Discontinued the aconite, diminished the iron.

On the morning of the 8th, still improving. Temperature normal; pulse normal. Discharged.

The mildest cases only require a laxative, nourishing diet and locally lotio plumbi subacet. or sol. bichloride; to allay itching, weak sol. of carbolic acid.

According to Reynolds, aconitum will cut short an attack. He administers minim ss to i every fifteen minutes for the first two hours; then in hourly doses until the surface is moist and the temperature lowered.

From personal experience, I find a small and frequent dose of aconite in cases of erysipelas very beneficial, and good results have followed its use.

Prof. Da Costa reports excellent results in cases with rapid spreading tendency, from the use of pilocarpinæ hydrochloræ gr.  $\frac{1}{6}$  hypodermically or ext. pilocarp. fluidum gtt. xx every two hours.

Cerebral symptoms, stimulants, opium and chloral.

Extension to throat, argenti nitras brushed over parts.



*Hermanus Boerhaave*  
*Collegij Medic. in Leyden Lugd.*  
*Regis Senatus Lectur. in Medic. cum*  
*1700. 1702.*



*Medicine, Botanicæ, Chemicæ &*  
*Publ. Professor Ordinarius.*  
*1700. 1702.*  
*Printed by J. J. van der Meer, in 't Landhuis te Leyden.*

## HERMAN BOERHAAVE.

The most celebrated teacher and practitioner of his age—almost of any age—in whose ante-room one might have encountered the representatives of the Emperor of China, sent from “remote Cathay” to consult the great oracle of his time.

Letters directed to “Dr. Boerhaave, Europe,” were safely delivered into the hands of this modern Galen.

“You must conform to the methods of Boerhaave in medicine,” wrote the decided Frederick the Great of Prussia to the Royal Academy of Berlin.

He was born in 1668, near Leyden. As a boy he was distinguished for his precociousness. He rapidly acquired Greek, Latin, Hebrew and Chaldee languages, besides a knowledge of ancient, modern and ecclesiastical history. He was early remarkable for his ease and fluency of diction; in short, he was the prodigy of the university of his day. His life was spent in Leyden and its great university.

In 1701 he became lecturer on the theory of medicine.

In 1709 he obtained the chair of medicine and botany.

In 1715 he was appointed Rector of the University, Physician and Prof. of Clinical Medicine to St. Augustine's Hospital.

In 1718 to his previous appointments was added the chair of chemistry.

You say how could one man do so much and do it well?

However, he not only did it so well that his lectures were held in such esteem that they were translated into most modern languages, even into Arabic; and instead of devoting his life to teaching, it seemed that it was merely his recreation.

His professional practice must have been immense; patients flocked to him from all over the then known world, and he accumulated a fortune of 2,000,000 florins, or about \$1,000,000, in about thirty-five years. His success was unparalleled. He was a member of all the most celebrated academies of science and royal societies in Europe.

He died in 1738, in his seventieth year.

A biographer says of him:

“Boerhaave was the most remarkable physician of his age, perhaps the greatest of modern times! A man who, when we contemplate his genius, his condition, the singular variety of his talents, his unfeigned piety, his spotless character, and the impress which he left not only on contemporaneous practice, but on that of succeeding generations, stands forth as one of the brightest names on the page of medical history.”

When he recovered from an illness in 1722, there was a general illumination in Leyden, and after his death a monument was erected to his memory in the church of St. Peter.

We can safely say that this was the unanimous judgment of the age in which he lived.

But what is there which science owes to Boerhaave to-day except the memory of a brilliant meteor which swept across the professional sky and leaves nothing but a pleasant memory. He wrote largely, but who quotes his books to-day except as a matter of medical history.

He knew everything and did everything better than any of his contemporaries, except those who made one thing, not everything, their study. He was familiar with the researches of the great anatomists, of the chemists, of the botanists of his times, of men of learning, but he was not a great anatomist, chemist or historian. As to his practice we cannot pronounce a very decided opinion, except that he was a man of judgment and independence.



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## EDITORIAL.

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### THE SUMMER VACATION.

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If any have gone to the hillside or the shore or risked the middle passage to scale the Matterhorn, neglecting to pay their doctor's bill, let them be *anathema, maranatha*. If the curse is effective, a goodly number must make large provision for masses to release their souls from purgatory. The epidemic of the Spring months depressed the souls and bodies of the people, and the doctors labored to exhaustion. For the former, where to go for refreshment and recuperation has been settled. The bank account has been examined and provision made for that. But the July bill is let stand over till the Fall. Reciprocity for help earnestly sought when help was sorely needed is neglected. Meanwhile the tired doctor stays at home because his patients have not paid their bills. He is afraid to spend a summering what he has received, in the uncertainty of when his clients may feel at liberty to settle their obligations. They will surely need him when they return and he will respond promptly; but his human nature will make his greeting the more cordial to the friends who were promptly considerate of his needs.

The city always shows some signs of the summer hegira, and yet they that go are but a small proportion of those that stay. Rest and change are useful. Useful are they beyond denial. They are sought in the seaside caravansary and the summer boarding house. That these are full of inconvenience and are not infrequently fraught with retrospect of discomfort is true. Like many other instances of supply and demand, the summer boarding house supplies a demand and creates a demand. The summer exodus is a regnant fad. There is abundant evidence that the boarding house supply has exceeded the demand. Financial wrecks strew the shores of this investment. Every physician's experience will testify to the reaction against the fad. Comfort has been sought and not found. The repetition of this experience has brought numbers to ask themselves the question: "Is it needful for us to shut up our home, let our husbands drift as best they can the weary summer weeks? Are cramped accommodations, indifferent and unaccustomed food, deprivation of our bath rooms and the like, the unusual outlay, really needful to be endured for a little moonlight at the sea-shore or the cooling dews of the hill sides?"

It is possible to abuse a good thing. A gentleman who had a fortnight's release from his ledger at the bank this June, stayed in town. He had most of his meals at home, leisurely visited many attractive places near by and slept in his own at nights. He confesses to never having had so restful and charming a vacation. His experience is not altogether unique. Contrast this with two weeks spent in exhausting travel, poor lodging, second-rate food badly served, irregular hours, with the immoderate tobacco and the unusual alcohol that are the frequent concomitants of vacation, and one would not stop to question which is the wiser course. How to freshen up and rest when opportunity offers is an accomplishment of rare benignity. Play is getting rapidly to be one of the lost arts. The children's *soirée dansante* at the summer hotel, with its full dress and conventional forms, with its elaborate suppers and late hours, is a horrible travesty on the play of childhood. Has the physician's vocation withered that he is impotent to compass its downfall?

The summer hotel Boniface is a sad ingrate. Occasionally, on a new venture, he announces that physicians and their families are taken at reduced rates. Generally, however, the obliging hotel clerk receipts their bills at full rates, with the frequent overcharge for sundries which, if not discovered, is the clerk's perquisite. Certainly, the summer boarding house has no better runner than the physician. The office hour doctor, whose clientèle is mainly of

easy summer pilgrims, gets his patients off early in the season that he may be free to go. The rank and file practitioner, who is everybody's servant, with no hours of his own, encourages the prevalent fad by sending away all he can, leaving him desolate. He is a medical man, full of courage, who dares to suggest that, perhaps, many would be just as well off, if not better off, at home.

Confessedly, this patronage of the summer boarding house has been enlarging directly with the financial and social ability to afford that patronage. The physical recuperation or mental relaxation is rarely a factor in the problem. *Has been* is used advisedly, for each year finds many at home who are able to go away, but who understand comfort and have the social standing or the indifference to defy criticism. The sleek and unctuous and well-salaried clergyman is strictly attentive to the demands of the summer solstice. The large majority of his brother laborers in the vineyard cannot afford to visit the North Cape or the Yosemite. The bodies of these latter seem well-preserved through a long life, and their usefulness is beyond question. Moneyed léisure is the patron of the tourist route, while the necessities of steady labor seem not to require these long vacations. Those who are able to go away go, while those who cannot afford to go away stay at home, and are equally well off. It is questionable whether they may not be better off.

The wail of over-work that comes from the school teachers leadens the educational atmosphere. Still it does seem a pity and an intellectual waste for the young collegian, in the most vigorous years of his young manhood, from eighteen to twenty-two, to be cut adrift for three months in the summer with nothing to do. By contrast, his numerous brethren who stock the world with products and push it into material magnificence will never know a fortnight's freedom in any year of a long and busy and useful life. The new day is dawning for the Chicago university is to open with four terms a year of twelve weeks each, with a week's vacation between terms, and one major and one minor study only for each term.

The summer vacation is a good thing, but a good thing abused. The fault lies in the thing itself. From a vacation in summer it has degenerated into a summer vacation. Out of it have developed the enervating and wasteful rankness of financial extravagance, social and domestic discomfort, debilitating habits and moral unrest. With its growth has arisen the necessity of over-strain of intricatory work. What should be distributed over many hours of each day is compressed into a few hours. What should

be the work of a whole year is crammed into eight months. The loss through wear and tear by the increased strain is irreparable. It is the pace that kills. No one, least of all the medical teacher, can inveigh against rest and change and variety. The summer hostelry is not the outcome of good living. It is the product of wasteful living. This is bad enough, but it shows worse when the candle is burnt at both ends—when rest in summer is transformed into summer profligacy. There is work enough and care enough and trouble enough, but some variety interpolated into each day, some vacation into each week and some outing with each month, would make the months from October to May so cheerful that there would be little need for a domestic upheaval from June to September.

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## BIOGRAPHICAL SKETCHES.

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### REPORTS OF COMMITTEES OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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#### SIDNEY ALLAN FOX, M.D.

On Wednesday morning, Dec. 10, 1890, Dr. Sidney Allan Fox died at his residence, 22 Cambridge Place, after a short illness, of acute lobar pneumonia.

Up to the previous Wednesday, when attacked, he had, beside attending to his professional duties, been under the strain of caring for his wife, who lay dangerously ill with typhoid fever.

He was taken with a chill and severe pain in his back, which he thought to be lumbago. The distress becoming great, and not yielding to appropriate treatment, he called in his friend Dr. George McNaughton, who found that the doctor had pneumonia. On the 5th (Friday) Dr. McNaughton became anxious about his patient's condition, and called to his aid Dr. William Maddren, who had attended the doctor through an attack of pneumonia in January, 1884.

Three days later (Monday), his condition becoming dangerous from inefficient heart action and œdema of the right lung, Professor Janeway was called in consultation. Dr. Fox recognized Professor Janeway, seemed glad to see him, and thanked him for coming.

At this time the doctor's condition was precarious, and, although the pneumonic process did not involve the whole of the left lung, the high temperature, with the bad condition of the circulation,



and a certain amount of delirium, made those in attendance suspicious that a septic influence was present.

Dr. McNaughton remained with Dr. Fox during Monday night. The following morning hope was revived by a slight improvement in the circulation. During Tuesday, the inhalation of oxygen-gas, various therapeutic measures, the free use of stimulants, and nourishment appeared to be having a good effect.

Tuesday night Dr. Maddren remained with Dr. Fox.

In the early hours of Wednesday Dr. Fox had become unconscious, and, the temperature in the rectum having risen to 107° F., it was evident that our friend was soon to leave us. From this time his heart grew gradually weaker, and between 5 and 6 A.M. the doctor ceased to breathe.

Sidney Allan Fox was born near Mount Sterling, Ky., on the 3d of July, 1856. He was the second son of John W. Fox and Katherine H. Rice, and, on both sides, was of English descent, through Virginian ancestry. Like an uncle before him, Dr. Fox was named for Dr. Sidney Allan, of Lexington, Ky., and his boyish admiration for that distinguished physician was the deciding force of his life. When 20 years old, he entered the University of Kentucky.

During the Spring and Summer of 1878 he read medicine with Dr. Allan, and, in the Autumn, came to New York and entered Bellevue Hospital Medical College. He was an enthusiastic student and thoroughly in earnest, and, being in straitened circumstances, he supported himself by teaching at night in the public schools of New York. He graduated from Bellevue in 1880, and, passing a competitive examination, he obtained a position upon the staff of Charity Hospital, Blackwell's Island. A year later, after he had become the house surgeon, he resigned in order to accept a position in the Hospital of the New York Society for the Relief of the Ruptured and Crippled.

During a vacation in the subsequent Summer he had charge of the Seaside Nursery of St. John's Guild on Staten Island.

The following year or year and a half he spent in practice at Norwich, Conn., associated with Dr. Carlton.

In 1882 he came to Brooklyn, where he began practice at No. 471 Vanderbilt Avenue. He had youth, enthusiasm, untiring energy, self-confidence, and one dominant purpose.

When the Brooklyn Elevated Railroad was first put in operation, Dr. Fox was appointed surgeon by the company, and he filled that position until the time of his death.

Dr. Fox was a pioneer in introducing and using the pneumatic cabinet in the treatment of lung diseases.

April 12, 1887, Dr. Fox was married to Miss Mary Coombs, an estimable and cultured lady, the only daughter of Congressman William J. Coombs. The union was an unusually happy one and their domestic life one of great devotion. The bereavement of the wife was made peculiarly hard, as she was not able to minister in any way at her husband's bedside, and was almost too ill to be told of the great sorrow that was to cloud her life.

In 1888 Dr. Fox became a member of the Medical Society of the County of Kings, and also of the Kings County Medical Association.

In the same year he was largely instrumental in establishing the Brooklyn Dispensary for the Treatment of Diseases of the Nose, Throat, and Lungs, at No. 545 Fulton Street.

In 1889 he was elected a delegate to the Medical Society of the State of New York.

Last Summer Dr. Fox attended the International Medical Congress, and it was his intention, as soon as his wife should recover, to revisit Berlin in order to study Dr. Koch's method of treating tuberculosis, with the view of introducing it at the Dispensary in which he was so much interested.

The following are the most important of Dr. Fox's contributions to medical literature:

1886—Pneumatic Differentiation. A Report of Sixty-nine Cases of Lung Disease, Treated by the Pneumatic Cabinet. (Proceedings Med. Soc. Co. Kings, Feb. and March.)

1888—The Pneumatic Cabinet in Lung Diseases (Gaillard's Med. Jour., June).

1889—I. Adenoid of the Vault of the Pharynx. II. Strumous Ozæna. III. Tubercular Phthisis; Secondary Tubercular Ulcer of the Tongue. (Kings County Medical Association, May.)

1890—Naso-Pharyngeal Carcinoma. Report of a Case with a Consideration of the Treatment of this Disease. (New York Med. Jour., March 8th. Medical Expert Testimony. (Brooklyn Med. Jour., Jan. 1891, pp. 20.)

In his professional life Dr. Fox was enthusiastic and sanguine, alert, quick of perception, and prompt to adopt new methods which he believed would advance him in his field of usefulness. A line of action once adopted, he was energetic and restless until he had achieved his purpose.

Socially the doctor was strong and steadfast in his friendships, and a loyal friend.

WM. MADDREN, M.D.  
GEO. McNAUGHTON, M.D., } *Committee.*  
FRED. D. BAILEY, M.D., }

## HON. PAUL H. KRETZSCHMAR, M.D.

Paul H. Kretzschmar, M.D., was born in the city of Dresden, Saxony, June 7, 1847.

He was educated at the Academy of the Holy Cross, Dresden. At the age of fifteen years he entered one of the largest drug houses in his native city. Three years later he removed to Berlin to pursue the study of chemistry and pharmacy, taking a two years course.

In 1869 he came to this country, which has been his home ever since. He engaged in the importation of drugs until 1872, when he removed to Brooklyn to engage in the retail drug trade.

In 1874 he resolved to fit himself for the practice of medicine, and with this purpose in view, matriculated at the Long Island College Hospital, and graduated from that institution in 1877.

He soon thereafter entered upon the practice of his chosen profession and rapidly acquired a large and lucrative practice, especially among his own countrymen.

After his graduation at the Long Island College Hospital he was appointed Assistant to the Chair of Practice of Medicine, then occupied by the late lamented Prof. Armor.

Dr. Kretzschmar was an ardent student and entered enthusiastically upon the study of thoracic diseases, especially phthisis, and contributed extensively to the literature of this subject. His especial study was the treatment of consumption in "health resorts" according to the methods of Dettweiler.

The doctor was a warm friend of the Medical Society of the County of Kings, and always interested in any measures which he thought would promote its welfare.

At the time of his death Dr. Kretzschmar held the honorable and important office of Supervisor-at-Large of Kings County, and in the administration of the office had made an enviable reputation for efficiency and a comprehensive understanding of the needs of the county.

He was stricken down with but slight warning, and was one of the many victims of "la grippe" and its sequels.

He was attacked with bronchial influenza early in April, but gave little heed to it, attending to all his many duties until the Sunday before his death, which occurred on Monday, April 27, 1891.

Saturday the 25th he felt unwell, yet he went out and visited a number of his patients, returning to his home in the afternoon, which he never left again in bodily life. His disease was acute nephritis.

To be brief, we believe that in the doctor's death many, perhaps most, of us have lost a warm friend, the Medical Society of the County of Kings a very valuable member, and Brooklyn a good citizen.

Our heartfelt condolence is extended to his bereaved family.

Respectfully submitted.

SAMUEL SHERWELL, M.D.,  
 CHARLES E. DE LA VERGNE, M.D., } *Committee.*  
 GEORGE G. HOPKINS, M.D., }

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DR. WILLIAM ANDERSON.

Dr. William Anderson died of uræmia on the sixth day of May last, at his residence, 527 Henry Street, aged 46 years 11 months and 27 days.

Dr. Anderson was born at Glasgow, Scotland, May 9, 1844. At the age of twelve years he was apprenticed as a type compositor for seven years. He served his time, and became a journeyman compositor in 1863.

His aim in life reaching higher than the printing business, however, he began the study of medicine in 1867, and passed the final examination for L.R.C.P. and S.Ed. in 1871, and began practice in Glasgow in October, 1872.

In 1873 he was appointed surgeon on board the steamship Pennsylvania of the State Line, and made several trips to the United States; and in November of the same year came to Brooklyn and located at 144 Union Street.

Dr. Anderson leaves a widow and five children.

HARRY KENT BELL, M.D., }  
 HENRY N. READ, M.D., } *Committee.*  
 JOHN HARRIGAN, M.D., }

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PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society's building, 356 Bridge Street, Tuesday evening, June 16, 1891.

The president, Dr. Frank E. West, occupied the chair.

There were about forty members present.

The minutes of the May meeting were read and, on motion, approved.

The Council made a favorable report upon the applications of the following, and recommended that they be elected to membership:

Drs. Jas. A. Roache, J. George Sauer, James A. Meara, George J. Dirkes, Ralph H. Pomeroy, Wm. E. Jenner, Benjamin L. Bostwick, Samuel G. Armor, Thomas M. Buckley, Salvador Gomez, John J. Paulson, Chas. P. Becker, Samuel F. Anderson, Francis Mansfield, Walter A. Morton, Edgar S. Holt, Emil C. Bernauer, Elmer F. Berkele, Herman L. Armstrong, Heydon Starrett, Frank Wiesbrod and Henry De H. Cameron.

#### APPLICATIONS FOR MEMBERSHIP.

The following were proposed for membership by the Committee on New Members, Drs. Raymond and McNaughton:

Drs. Chas. Ware, 135 Remsen Street, Coll. P. and S., New York, 1883; James Albert Meara, 4 Lafayette Avenue, Dartmouth Med. Coll., 1888; James Aloysius Roache, 970 Bedford Avenue, L. I. C. H., 1890; Walter O'Brien, 165 Baltic, U. N. Y., 1890; J. George Sauer, 1039 Third Avenue, Univ. Vermont, 1890; William Edward Jenner, 429 Henry Street, L. I. C. H., 1889; Heydon Starrett, 178 Stuyvesant Avenue, Coll. P. and S., New York, 1880; Ralph Hayward Pomeroy, 106 Berkeley Place, L. I. C. H., 1889; James Madison Horton, 232 Putnam Avenue, Coll. P. and S., Baltimore, 1890; Léonie Hürliman Fordham, 384 12th Street, Syracuse Med. Coll., 1889; Edward Morgan, 12 Underhill Avenue, Penn. Med. Coll., 1879, U. N. Y., 1888; Chas. Paul Becker, Hale Avenue, near Atlantic, L. I. C. H., 1866; Francis Mansfield, 140 Berkeley Place, Coll. P. and S., New York, 1885; John James Paulson, 335 15th Street, L. I. C. H., 1891; Walter Alfred Morton, 324 Gold Street, Dartmouth Med. Coll., 1889; Salvador Gomez, 359 9th Street, L. I. C. H., 1891; Edgar Slayton Holt, 422 Clermont Avenue, U. N. Y., 1884; Thomas Michael Buckley, 34 Clinton Street, L. I. C. H., 1891; Emil Constant Bernauer, 253 Stockton Street, U. N. Y., 1891; Elmer T. Berkelé, 610 Willoughby Avenue, Coll. P. and S., New York, 1890; Samuel Glasgow Armor, L. I. C. H., 1891; Herman L. Armstrong, 135 Clinton Street, Med. Coll., Ohio, 1881; Belle Voorhees Aldridge, 206 Garfield Place, Woman's Med. Coll., Penn., 1886; Benj. Earle Bostwick, L. I. C. H., 1891; Addison Luzerne Coville, Bell. Hosp., New York, Coll. P. and S., New York, 1890; Samuel Frederick Anderson, 672 Degraw Street, L. I. C. H., 1890; Wm. Adolph Meyers, 1404 Bushwick Avenue, U. N. Y., 1887; George J.

Dirkes, 540 Madison Street, Coll. P. and S., New York, 1889; Jay H. Radley, 51 W. 12th Street, New York, Coll. P. and S., Chicago, 1889; John Kepke, 318 E. 18th Street, New York, Bell. Hosp. Med. Coll.; Samuel Brothers, 93 Madison Street, New York, Coll. P. and S., New York, 1890; Norman Hyde Hudson, 1811½ Third Avenue, Birmingham, Alabama, L. I. C. H., 1890; Wm. H. Baldinger, 321 9th Street, Jeff. Med. Coll., 1885; E. S. Ettinger, 880 Gates Avenue, Coll. P. and S., New York; James Cole Hancock, 43 Cambridge Place, Coll. P. and S., New York, 1889; Joseph Welsley Malone, Bensonhurst, New York, Coll. P. and S., Baltimore, 1888; Anthony J. Burger, 496 Decatur Street, Univ. Penn., 1883; Edmund Sanford Young, 112 Milton Avenue, Dorchester, Massachusetts, L. I. C. H., 1891; Oscar Embden, 123 Schermerhorn Street, Heidelberg, 1888; Sylvester J. Byrne, 56 7th Avenue, L. I. C. H., 1890; James B. Worden, 254 Carlton Avenue, Coll. P. and S., New York, 1889; George Everson, 125 Willoughby Street, Dartmouth Med. Coll., 1884.

The following applications were also made :

Dr. Henry Noss, 328 Jay Street, L. I. C. H., 1891; proposed by Dr. Frank E. West and Dr. Hutchinson.

Dr. Ashley L. Stowell, St. John's Hospital, Univ. Vermont; proposed by Drs. J. H. Hunt and Bliss.

#### ELECTION OF NEW MEMBERS.

The following, having been favorably reported upon by the Council, were declared members of the Society :

Drs. Jas. L. Cornell, F. M. Nehrbas, Eugene P. Hickok, Thomas A. York, Richard Slee, James P. O'Hanlon, Phillip H. Berlenbach, Henry M. Hufnagle, George Chaffee, R. Curtis Gray, Edward H. Babcock, George G. Ward, Francis I. Leonard, Thomas L. Fogarty, Wm. H. Clowminzer, Chas. P. James, Robert J. Morrison, Chas. W. Brunner and George Boucher.

#### SCIENTIFIC BUSINESS.

The report of the Committee on Diseases of Children, consisting of Drs. E. H. Bartley, Jerome Walker and Jas. McManus, was read by the chairman, Dr. Bartley. The subject of the committee's report was "Recent Progress in Infant Feeding." This paper was discussed by Drs. Dickinson, Eccles, Emery, McManus, Hutchinson, Mosher, Briggs and Bartley.

#### UNFINISHED BUSINESS.

The report of the Obituary Committee upon the late Dr. Wm. Anderson—Drs. Harry Kent Bell, Henry N. Read and John Harrigan,—was read by the Secretary.

The Obituary Committee upon Dr. Paul H. Kretzschmar—Drs. Chas. E. De La Vergne, Samuel Sherwell and Geo. G. Hopkins—reported through Dr. De La Vergne that an obituary report had been prepared, but that Dr. Sherwell had it in his possession, and was absent from the meeting. If it was the wish of the Society, the report would be published without reading. It was so ordered.

On motion, it was ordered that the By-Laws be temporarily suspended and that the applicants reported upon favorably at this meeting be declared elected to membership.

NEW BUSINESS.

There was no new business to come before the Society, and, on motion, the meeting adjourned at 10.15 P.M.

W. M. HUTCHINSON,  
*Secretary.*

[As there was no stenographer present to report this meeting, the above minutes are quite likely somewhat incomplete.]

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*PROGRESS IN MEDICINE.*

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SURGERY.

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BY GEORGE RYERSON FOWLER, M. D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

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A METHOD OF OPERATION IN POLYPI OF THE NASAL CAVITY.

Roman von Baracz, Lemberg (*Centralblatt f. Chirurgie*, No. 16, 1891). The author refers to the favorable results following the method introduced by Furneaux Jordan (*British Med. Journal*, May 2, 1885), the fundamental principle of which consists of clearing the anterior naris by means of the formation of a triangular-shaped flap from the upper lip and wing of the nose, in order to gain access to the nasal cavity. The steps of Jordan's operation are as follows: A curved bistoury is introduced beneath the upper lip at the side corresponding to the polyp, passed perpendicularly until its point emerges into the nasal opening, and the upper lip cut through from behind forward. The cut edges of the upper lip are compressed. A long and pointed bistoury is introduced into the nasal cavity and an incision made, continuous with that just described and passing out through the dorsum nasi. In this man-

ner the soft parts of the nose are separated in a longitudinal direction. A few strokes of the knife suffice to lift the flap thus formed and permit inspection of the nasal cavity. Should the opening thus made prove insufficient for the removal of the growth, which is accomplished by the finger, aided by knife and scissors, this may be enlarged by the bone forceps.

In 1888 König (*Centralblatt f. Chirurgie*, No. 10) called attention to a method quite similar to Jordan's. The only essential difference between the method of Jordan and that of König consists in the use of the large sharp spoon by the latter for the removal of the tumor. In B.'s operation a combination of the two methods is aimed at by making a formal osteo-plastic resection of the nasal bone and the nasal process of the superior maxillary bone, and the removal of the growth by means of König's sharp spoon. The operation is performed under cocaine anæsthesia. It is claimed that no deformity results, and that the cicatrix is almost invisible.

#### ARTHROTOMY IN OLD LUXATIONS.

V. Vaurossy (*Wiener klin. Wochenschrift*, 1890, No. 50). V. reports from the Innsbruck clinic nine cases of old elbow luxations, and one each of shoulder and metacarpo-phalangeal of the thumb. The elbow luxations consisted of backward dislocation of both of the forearms. Either the external or internal epicondyle, or both, as in one case, served as barriers to reduction by being forced into the joint. The longest duration of the luxation was twenty-four months. The younger the individual and the luxation, the more favorable the prognosis. The cartilaginous covering of the articular extremities of the bones suffers less in young individuals, in case of luxations of long standing, than in older ones.

In performing arthrotomy in these cases, the joint was opened from both sides. The author, as a result of his experience, declares that by means of arthrotomy a much better result is reached than by a most economically planned resection. Subcutaneous separation of the intra-articular bands which form in these cases the author declares to be entirely insufficient.

#### SUTURING OF NERVES.

Th. Köllker (*Die Verletzungen und chirurgischen Krankheiten der peripheren Nerven*, *Deutsch Chir.*, 189, Liefg. 246, Stuttgart, Ferd Enke, 1890). The discussion of the interesting question of primary union of divided nerves, as well as the processes of degeneration and regeneration, is entered into in connection with the subject of nerve suture and operations upon nerves. The



author's researches, to be published later, show, contrary to Friedländer and Krause, degeneration of all of the fibres of the peripheral nerve stumps, the latter, according to K., thereafter taking no active part in the process of regeneration, but simply serving as a guide for the newly-formed nerve fibres in their passage from the central nerve stump to the periphery. Immediate contact of the severed axis cylinder may possibly lead to immediate union of the same, but there is no indubitable evidence of this having occurred. Union by formation of a small amount of new-formation tissue, with the development of nerve fibres as demonstrated by the microscope, without degeneration of the distal ends of the nerves, according to K., has occurred.

In suturing divided nerves, K. does not employ one method to the exclusion of the rest. In cases in which the ends can be brought together only after considerable force, the direct method is indicated; in cases in which there is no tension, the indirect plan is adopted. Silkworm gut, or catgut, is employed as a suture material. In cases in which there is a deficiency to the extent of 4 cm., due to removal of a section of the nerve, he recommends stretching the nerve to fill the gap, and subsequent suturing. In cases of a more considerable gap, Vanlair's method of tubulization, or union by means of catgut loops, is preferable to nerve transplantation. In cases in which the central end of the injured nerve cannot be found, implantation of the distal end to a neighboring nerve is recommended. This method of "neurotization" whereby the distribution to a distant part is effected through the medium of a nerve trunk not originally destined for this purpose, promises to be a valuable aid in cases otherwise hopeless.

#### UPON THE SURGICAL TREATMENT OF BASEDOW'S DISEASE.

F. Lembke (*Deutsche med. Wochenschrift*, 1891, No. 2). The author starts out with the assumption that the treatment of exophthalmic goitre belongs to the surgeon rather than to the medical practitioner. He was led to this conclusion by the fact that in two cases in which the disease existed in a marked degree, he obtained favorable results by the removal of portions of the thyroid body. The first case, that of a seventeen-year-old youth, in whom tracheotomy was necessary in order to relieve the greatly embarrassed breathing, recovered completely after removal of the left half of the goitre. In the second case, that of a man of forty-eight, L., encouraged by the success obtained in the first case, removed the right half of the enlarged thyroid body. Recovery

followed. The exophthalmos in both instances disappeared, and a marked improvement in the cardiac symptoms followed.

[It would be interesting to learn whether or not the remaining half of the thyroid body resumed its normal size.—G. R. F.]

#### ICHTHYOL IN ERYSIPELAS.

Fessler (Clinical and Experimental Studies upon Surgical Infectious Diseases, München, Centralblatt f. Chirurgie, No. 16, 1891). The author, from his experiments upon the influence of ichthyol upon the micro-organisms of erysipelas, concludes that this remedy possesses a specific influence over the development of the streptococcus of this disease. Both the soda and ammonia salts of ichthyol are effective, in strong solution, in destroying the germs. Experiments upon erysipelas patients during a period of four years gave very favorable results. The average duration of the disease is reduced to about one-half. The treatment consists of thoroughly cleansing the skin and adjacent mucous membranes with a solution of salicylic acid. The erysipelatous area, as well as a hand's breadth beyond the same, is thoroughly rubbed in with pure ichthyol or ichthyol-lanolin. The ointment is then thickly spread upon the parts and dressed with compresses of gauze moistened with solution of salicylac, the whole being finally covered by non-absorbent cotton.

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### OBSTETRICS.

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BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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#### PREGNANCY AND VAGINAL LIGATURE.

Schücking (Centralbl. f. Gyn., No. 20, 1891). This paper is a reply to Saenger's recent strictures upon Schücking's operation. Saenger's criticisms were based mainly on the possible effect of vaginal ligature on subsequent pregnancies. Against the 12 cases of seasonable births and 109 cases of pregnancy after ventro-fixation cited by Saenger the author claims 23 cases of full term births and 217 cases of pregnancy after vaginal ligature.

Ventro fixation he regards as a dangerous operation. Abortion or premature labor are common after this operation while vaginal

ligature is free from danger, is reliable in its results and does not in the least tend to disturb a subsequent pregnancy.

The author's operation is endorsed by many of the best German authorities in preference to ventro-fixation, and Klotz after operating in sixty-two cases by the latter method has abandoned it for that of Schücking.

#### HYPEREMESIS GRAVIDARUM, PTYALISM AND HYSTERIA.

Ahlfeld (Centralbl. f. Gyn., No. 17, 1891). Kaltenbach in a recent paper has called attention to the frequency with which the hyperemesis of pregnancy occurs in hysterical patients and to the fact that the therapeutic measures which prove most successful in the treatment of hysterical manifestations have a favorable influence in the former affection. Yet he does not claim that the pernicious vomiting of pregnancy can be directly traced to hysteria. The author has met with several cases in which hysteria was the principal foundation of the uncontrollable vomiting. He regards both the hyperemesis and ptyalism of pregnancy as nothing more than an exaggeration of the reflex neurosis common in pregnancy in many women. His management of these cases is precisely the same as in hysteria uncomplicated with pregnancy. He enforces rest, forbids intercourse with friends and proscribes all mental excitement. His results he claims substantiate his doctrine.

Apropos of this question are the following remarks from the editorial columns of the "Br. Med. Journal" of May 30, 1891:

This subject, of so deep interest to the practitioner, is at present occupying the attention of a large number of British and foreign obstetricians. Sixteen years ago there appeared in the journal the now celebrated paper by Dr. Copeman, which was read all over the globe, and gave his name to the "method" he advocated. Copeman's method simply means dilatation of the cervix with the finger. Undoubtedly it has proved of the highest service, whatever may be the precise nature of its action. Dr. Graily Hewitt, whose work on *Severe Vomiting during Pregnancy* appeared last year, traces the disorder to flexions, with inflammatory changes in the uterus. . . . Other authorities refer the trouble to lesions of the cervix, and treat them with counter-irritants. . . . There remains, unfortunately, the fact that in many cases nothing stops the vomiting save termination of the pregnancy. The induction of labor is not without risk; the practitioner is unwilling to resort to it when the vomiting has not lasted long, whilst later on the patient may be fatally enfeebled by constant sickness; hence the gravity of the entire question becomes

self-evident. No wonder so much is written on hyperemesis gravidarum, but much more remains to be done before anything like a sound routine practice, suitable to others than hospital obstetricians of extremely specialized experience, is established to the benefit of humanity and the comfort of the practitioner.

#### INDICATIONS FOR CÆSARIAN OPERATION.

Piskacek (Arch. d'Obstet. et de Gyn., April, 1891). In absolute contraction of the pelvis the author pronounces himself in favor of the Porro operation. His reason is the danger of a second Cæsarian section in the event of a new pregnancy and the risk of uterine rupture should the operation not be done immediately at the onset of labor.

In pelves flattened less than to  $7\frac{1}{2}$  c.m. and in pelves generally contracted to 7 c.m. neither version, perforation nor the conservative Cæsarian section is to be thought of so long as the time for premature labor has not passed.

If the pelvis has a diameter of less than 7 c.m. he advises Porro (on election of the mother) to prevent a subsequent pregnancy. If the woman rejects abdominal section, even though the child cannot be saved by induced labor, the latter operation or induced abortion must nevertheless be done in the presence of absolute contraction.

Podalic version as an alternative of section on the relative indication, an atypical application of the forceps or embryotomy on the living child will the more rarely be the choice of procedure the less time is lost in waiting. With the primipara version must never be preferred. With multiparæ it must be resorted to only in the most favorable conditions.

The author thinks the infantile mortality of craniotomy is compensated in a year by the possibility of having a living child in another pregnancy and the fact that women after Cæsarian section do not readily become pregnant again, to say nothing of the mortality of the Cæsarian operation. Thus Cæsarian section is conservative only in certain conditions, that is to say in conditions favorable to the operation, for example when a living birth is impossible at or near term, *per vias naturales*, when the mother desires expressly to have a living child and assents to the operation after the danger has been fully explained to her.

In the main P. employs Cæsarian section in multiparæ only when they have lost their children in previous births. In primiparæ there can be no question when there is at the beginning of labor a rigidity of the cervix that threatens rupture of the uterus.

In all other cases he considers perforation practiced upon the living foetus not only legitimate but imperative. Only the conservative operation of Saenger and not the Porro can come in competition with perforation.

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## PRACTICE OF MEDICINE.

BY HENRY CONKLING, M. D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

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### COLD BATHS IN ENTERIC FEVER.

Hare (Lond. Prac., March, 1891,) gives an analysis of 1,173 cases of enteric fever in hospital practice treated by the above method. The percentage of death was 7.84. In a former series of 586 cases in which the cold water treatment was not used the death rate was 14.50. In the cases published there is, therefore, a reduction in the number of fatal cases in favor of the bath treatment by 50 per cent. These favorable results, it is believed, depended on the institution of the treatment during the first periods of the disease.

There are some changes in the way of reduction in the secondary causes of death by the water treatment. The percentage of deaths from chest complications was reduced 75 per cent., there also being a great reduction in *attacks* of bronchitis and bronchial pneumonia. This the author believes to be due to the stimulating effects of the cold water, causing more active inspiratory efforts, sometimes cough, and thus clearing the bronchial tubes of any mucus which may be in them. The cerebral complications were also lessened, while the number of cases dying from asthenia was reduced 50 per cent. There is recorded no change in the death rate from ulceration or hæmorrhage. The author believes that the treatment affects in no way the depth of the ulceration.

The main idea which the reading of this exhaustive and statistical paper conveys is, that, by the use of cold baths, there is a diminution in the intensity of the fever, not—it is reasonable to suppose—the fever due to specific intestinal ulceration, but that which may be called secondary, coming from the engorged mucous membrane. This view is somewhat strengthened by the recorded note that diarrhœa in these cases was lessened. By this treatment exhaustion was not so common as in the first series of cases.

The plan pursued was that of Brand. *Whenever the temperature in the rectum reached 102.2°, or a mouth temperature of 103°, the patient was given a bath lasting fifteen minutes, the water being at a temperature of 68° F.*

In this connection, in the line of antiseptic treatment, differing from the above notes, it may be mentioned that Dujardin-Beaumont, of Paris, gives his emphatic endorsement to salol as an antiseptic disinfectant to the intestinal mucous membrane, giving 30 to 60 grains in the twenty-four hours, either alone or with salicylate of bismuth.

#### CAUSE AND TREATMENT OF DIABETIC COMA.

Schmitz (Berlin klinische Wochenschrift) gives a description of two forms of coma which he has met with in practice. There is, scientifically speaking, but one true diabetic coma, and the first variety of the paper is nothing more nor less than a simple condition of partial asthenia, not at all uncommon in diabetic patients, but the author describes the result of the weak condition as a coma resulting from poisoning due to carbonic acid. In diabetes there is degeneration of the muscular system, causing a weakness of the muscular fibre. The heart, as a muscle, is thus affected, the arterial circulation becomes imperfect, and the patient suffers from a venous distention, leading to the usual nervous manifestations.

The author's second variety is more important. The reasons as to the nature of the coma, and the treatment mentioned are clear and original. This coma is a pure auto-infection. The first symptoms seem to be related to the digestive tract. These, after lasting some few days, are followed by disturbances in the sleep. Constipation or diarrhoea may be present. Attacks of colic are quite frequent and are generally followed by emesis. The patient, even when in the comatose state, may have these attacks of colic, which rouse him for the moment. The author believes that the cause of this form of coma is a poison which comes from decomposition in the intestinal tract. The treatment is to remove the cause. This is done by *administering castor oil* in doses of from half an ounce to an ounce, regardless of the former condition of the bowels (constipation or diarrhoea).

Free catharsis relieved all the cases. In this coma there is no marked weakening of the heart.

#### EGG-ALBUMEN ENEMA.

Huber (Deut. Archiv. f. klin. Med.) performed a number of experiments to test the nutritive properties of egg-albumen as an

enema, alone and after certain preparations. The quantity absorbed was ascertained by examination of the fæces. Egg-albumen alone is absorbed by the rectum in too small quantities to be of value as a nutriment. *Fifteen grains of common salt added to each egg caused absorption to the extent of 70 per cent. of the mass.*

#### ANALYSIS OF TWO HUNDRED AND SIXTY-TWO CASES OF CHOREA.

Goodall (Guy's Hosp. Reports) has analyzed the above number of cases of chorea occurring in the hospital during eleven consecutive years. Seventy-four of this number were males and one hundred and eighty-eight females. The youngest case was a female infant of one year; the oldest case a man of thirty-six years. There were one hundred and four cases that had recurrence of the disease. The smallest number of attacks occurred during the summer months. Hemichorea was present in sixty cases. In one hundred and fifteen cases the heart was normal, twenty-one of which number had had rheumatic fever. In one hundred and thirty-five cases there was some cardiac or vascular change. As no mention is made of the presence or absence of hypertrophy or dilatation, it is impossible to make out what per cent. of these the author regards as being chronically diseased.

There were eleven fatal cases, in which death was due to changes in the endocardium, emboli probably being formed in many cases. Seventy-one cases had had rheumatic fever; in only sixteen cases did choreic manifestations precede the fever.

The family history showed chorea in twenty-eight cases, mother, brother or sister having been affected. There was no history recorded of a father having had the disease. As causes are mentioned rheumatic fever, fright (forty-two cases), irritation, pregnancy, injury.

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## PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M.D.,

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### BOVINE TUBERCULOSIS.

At a recent hearing before the Committee on Public Health of the Massachusetts Legislature, on the dangers from tuberculous milk, Dr. Ernst gave some testimony which is of general interest. (Sanitary Inspector, Feb., 1891). Dr. Ernst has for the past three

years been investigating the subject for the Society for the Promotion of Agriculture. In the course of his testimony he gives the results of experiments conducted in his laboratory by Dr. A. K. Stone, on the vitality of the tubercular bacillus. These experiments show that after an extreme drying, the bacillus has retained its vitality and infectious properties for a period of three years and a half at least.

He remarks that the disease is spread in three ways, viz.: by inhalation, inoculation and by means of the ingesta. He divides the information which he has been able to obtain, in regard to the infectiousness of milk from tuberculous cows, into matters of opinion and matters of fact. To obtain the opinions of a large number of physicians and veterinarians, he sent out a circular of inquiry, and obtained 1,200 or 1,300 answers. Of these, but two expressed a disbelief in milk as a vehicle for the virus of tuberculosis. A comparatively small number furnished him with cases which they believed were distinctly traceable to the milk of tuberculous cows. He says: "I have records of cases of probable infection of children from the milk of mothers with tuberculosis of the lung and mamma. I have cases of infection of children from milk coming from a tuberculous cow. I have a large number of cases from the veterinarians, showing the infection of calves from tuberculous cows."

Dr. Ernst prefixes his remarks upon the results in searching for the bacilli in milk, by calling attention to the great difficulty of finding them in this fluid when present. A single examination of a milk for the tubercular bacilli requires perhaps three or four days' work and the preparation of a large number of "cover glasses," and the examination of each one for from a few minutes to an hour. Out of 126 series of examinations made in this way, of milk from cows suffering with tuberculosis in organs other than the udder, the bacillus was found in 16 instances, or in 13 per cent. of the cases examined.

The same milk was used for inoculation experiments with rabbits and guinea-pigs. In six of the seventy-four rabbits inoculated tuberculosis was produced. The quantity of milk injected was from one to three drops, and by this test a little over 8 per cent. of the rabbits operated upon were shown to have become tubercular after the inoculations. The bacilli may be found either in the cream or in the milk.

Out of seventy-seven guinea-pigs inoculated, ten became tuberculous, or 13 per cent. This number agrees with the proportion of samples in which the bacilli were found.



Feeding experiments with the same milk were carried out on rabbits, pigs and calves. Out of twenty-three calves, eight became tubercular; of a litter of twelve healthy pigs, five became tubercular. The feeding experiments with rabbits were less decisive.

A similar line of investigation was pursued with a series of samples of milk collected from the markets in Boston (the number of samples not mentioned), with the result of finding the bacilli in one case with the microscope, and of proving its presence in another by inoculation experiments.

The report of Dr. Peters, the veterinarian of the same society, says Dr. Ernst, "shows that tuberculosis in cattle is quite too prevalent for the safety of the public health, in cattle that are used for the supply of milk in this part of the country.

"As a result of the work that we have been doing, it is distinctly shown, and to my mind very emphatically proved, that the milk of cows affected with tuberculosis may contain, and does contain, the virus, no matter how extensive or to how small extent disease may exist in the animal furnishing the milk."

"The proportion of the milk that is virulent, coming from cattle even with no tuberculosis of the udder, is greater than has thus far or until very lately been suspected.

#### THE CORONER SYSTEM OF THE UNITED STATES.

This was the subject of a report to the recent meeting of the American Medical Association at Washington, of Dr. H. O. Marcy as chairman of a committee of that body of three years standing.

The conclusions reached by the committee are summed up in the following propositions :

- 1st. To abolish the office of coroner.
- 2d. To dispense with jury service.
- 3d. To separate the medical from the legal duties in all cases involving the examination into the causes of death where crime is suspected.
- 4th. To intrust the medical examination only to competent medical officers properly trained in their work.
- 5th. To make the number of these medical officers as small as consistent with the proper discharge of their duties.
- 6th. To consign all questions of law only to properly qualified legal magistrates.
- 7th. To remove the appointment of these officers entirely from the question of political consideration, and to be based only upon their possession of the requisite and proper qualification.—*Pittsburgh Medical Review*.

## SCIENCE VERSUS PESTS.

Prof. E. A. Snow, of the University of Kansas, has succeeded in finding a method of checking the ravages of the chinch bug of the Western States.

This destructive little insect works great damage and frequently annihilates whole fields of grain by sucking the sap from the growing stalk.

Prof. Snow has found a means of infecting the bugs in the laboratory with a highly infectious malady. When these few infected bugs are scattered through a field in which the healthy ones are found, the infection spreads rapidly and soon rids the grain of them.

Fields thus cleared of them last year are not affected this year. This is another triumph of science over a formidable enemy of the farms of the great West. A similar method has been tried with the army worm, and with partial success.—*Exchange*.



## OPHTHALMOLOGY.

BY RICHMOND LENNOX, M. D.,

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## PATHOLOGY OF CHALAZION.

In a previous number of this journal reference was made to a recent article by Tangl, claiming that chalazion should be regarded as a manifestation of local tuberculosis. Weiss (Klin. Monatsblätter, June, 1891, p. 206,) has made inoculation experiments, feeling that if chalazion be really tubercular, such inoculation should be followed by tuberculous symptoms. On this view he inoculated three rabbits by putting pieces of freshly excised chalazion into the anterior chamber. The patients from whom the chalazion material was taken were respectively a woman suffering from pulmonary phthisis, a very robust workman with multiple chalazion, and a somewhat anæmic woman who shortly before had passed through a severe confinement. In none of the inoculated rabbits did tuberculosis develop. After a few days, when the moderate reaction subsequent to the operation had subsided, the tissue masses introduced into the anterior chamber became rapidly absorbed, so that soon nothing or almost nothing could be seen remaining. This absorption was on the whole rapid, the inoculation from the first patient having disappeared within nine days.

In one case, one of the small light granules such as one seldom fails to find in chalazion was also introduced into the anterior chamber. While the remaining tissue masses were completely absorbed, the light granule is still, after several months, completely unchanged in the anterior chamber, the eye meanwhile showing no irritation. Even when the chalazion material was taken from an evidently tuberculous patient, no iris tuberculosis followed inoculation. As a control experiment, one rabbit was inoculated in the same way with tissue from a cheesy lymph node excised from a child suffering from scrofulous ophthalmia. Iris tuberculosis promptly followed. In this case several injections of tuberculin were made, in order to test its effect on the course of the tubercular process. The injections were followed by rise of temperature, but locally no effect could be observed.

Weiss concludes that chalazion is not the result of local tuberculosis, and in this agrees with Deutschmann (*Beiträge zur Augen.* Heft ii., p. 109).

#### ON THE VALUE OF FLUORESCINE IN THE USE OF THE GALVANO-CAUTERY.

Nieden (*Hirschberg's Centralbl. f. p. Augen.*—May, 1891, p. 129,) in common with probably the majority of observers, is strongly in favor of the galvano-cautery in suitable cases of corneal ulceration. He has, however, had difficulty in accurately limiting the area of tissue involved and therefore to be cauterized. The use of a two-per cent. solution of fluorescine, as recommended by Thomalla and others before the application of the cautery, removes this difficulty, as by its staining properties the limits of infected cornea are absolutely defined, and one can therefore be sure of thoroughly cauterizing the entire area even at one sitting.

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## DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

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#### THE NATURE AND TREATMENT OF STAMMERING.

Emil Behnke (*Jour. Laryngology and Rhinology*, July, 1891). The author declares that the terms stammer and stutter should indicate the same condition, rejecting a former distinction that stammer should refer to that form of obstruction in which there is

inability to pronounce vowels, and stutter to that form of impediment in which the consonants are at fault. The causes of these disturbances are attributable to the nervous centres controlling the mechanism of respiration, phonation and articulation.

Children afflicted with stammering do not, as a rule, outgrow the habit; ridicule or severity will increase the difficulty.

Conditions needing surgical or medical interference, such as spinal curvature, post-nasal adenoids, decayed teeth, intestinal worms and phimosis, may prevent cure of stammering until their removal.

Cases of stammerers are divided into two classes—those in which fault lies in management of respiratory apparatus, and those in which it does not. In former the prognosis is more hopeful. To test patient, he is placed flat on his back upon a couch, and is drilled in methodized and graduated series of sounds and inspiration, produced by diaphragm and muscles of abdominal walls, the hand of the trainer upon the epigastrium accentuating these movements.

If after such practice the patient shows improvement, a favorable result may be expected from treatment. In those cases in which obstruction does not depend upon imperfect respiration, Behnke attributes much of trouble to “an involuntary exaggeration of all the stops and checks taking place in vocal apparatus from glottis to lips, and he must therefore be trained to make these closures as shortly and lightly as possible.” Thus a short aspirate may be inserted after a consonant; as G-h-eorge, instead of George, or, as patient would say, G-g-g-eorge; and p-h-a, instead of pa.

Stammerers sing and whisper without difficulty, because in singing there is almost continued tone, and in whispering there is absence of tone. It is advised “to dwell on vowels at expense of consonants—and if vowel difficult to sound, it should be preceded by a short inspiration. Another beneficial exercise is to speak slowly, with teeth overlapping and pressed tightly together.

Result of treatment influenced by severity of case, intelligence of patient, also existing morbid conditions, especially those due to chorea or other nervous disturbances.

#### MALIGNANT NASAL TUMOR.

A. M. Sheild (*Lancet*, July 4, 1891). A case of interest in which a nasal tumor, apparently polypoid, proved upon removal to be malignant, involving middle turbinated tissue and antrum. A radical operation was performed. The entire jaw was removed, the neoplasm being found to completely occupy the antrum, extend-

ing above to the region of the cribriform plate and behind to the pterygoid region. The bone of jaw very friable. Recovery rapid, patient sitting up on seventh day.

The clinical signs denoting a malignant nasal polypus are advanced age of patient, tendency to bleed and rapid growth. This tumor was extremely insidious, no symptoms of antral distention being present, although entire antrum was filled with tumor. In the nose the growth was polypoid in appearance. On removal, hæmorrhage was excessive. Author cautions concerning the treatment of polypi which rapidly re-occur, and in those cases in which there is probable malignancy and involvement of deeper structures, advises complete removal of affected tissue, including bone, as affording only chance of future immunity.



## CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

### STERILIZED MILK AND INFANT FEEDING.

Dr. Theodore Escherich, Professor at Graz, at the International Medical Congress held last year at Berlin, read a paper upon "The Use of Sterilized Milk for Infants" and gave a demonstration of a new apparatus. The paper is published *in extenso* in the "Berliner klinische Wochenschrift" for November 10, 1890. The subject is further discussed in an article published in the "Therapeutische Monatshefte," for May, 1891, by Dr. Richard Drews, physician to children in Altoona, in a paper entitled "Directions for Diluting and Sterilizing Milk for Food for Nursing Children." In these papers the following points are presented:

(1) The difficulties, and the unfavorable results, in the artificial nourishment of children which existed until the subject was studied from a scientific standpoint. These difficulties result from the fermentation processes which take place in milk, especially during the summer months.

(2) These fermentation processes are arrested and prevented by the use of an apparatus for rendering the milk sterile. The apparatus of Prof. Saxhlet, first described in the "Münchener medicinische Wochenschrift," 1886, is too complicated for general use.

(3) Closely connected with the question of sterilization is that of graduating the amount and frequency of the meals. The amount

of fluid should correspond with the capacity of the child's stomach, varying with its age and weight.

(4) The proportions of water to be added to the milk is also to be varied with the age of the child.

The following table covers these important points in detail:

Month.	Week.	Amount of Milk.	Amount of Water.	Total.	No. of Meals.	Amount at Each Meal.	Weight of Child.	Gain.
I	1/2	150	+250	= 400	:8	= 50		-220
	1	200	+200	= 400	:8	= 50	3275	+ 0
	2	250	+250	= 500	:8	= 62	3376	+102
	3	300	+200	= 500	:8	= 62	3477	+101
	4	350	+250	= 600	:8	= 75	3579	+102
II	5-6	400	+400	= 800	:7	=115	3942	
	7-8	450	+450	= 900	:7	=128	4306	per week +182
III	9-10	500	+400	= 900	:7	=128	4614	
	11-12	550	+450	=1000	:7	=143	4921	" " +154
IV	13-14	600	+400	=1000	:7	=143	5259	
	15-16	650	+350	=1000	:7	=143	5576	" " +164
V	17-18	700	+300	=1000	:6	=166	5848	
	19-20	750	+250	=1000	:6	=166	6119	" " +136
VI	21-24	800	+200	=1000	:6	=166	6679	" " +140
VII	25-28	900	+100	=1000	:6	=166	7234	" " +139
VIII	29-32	1000		=1000	:6	=166	7669	" " +108
IX	33-36	1200		=1200	:6	=200	8089	" " +105
X	37-40	1200	+ other food	=1200	:6	=200	8391	" " + 76
XI	41-44	1200	+ " "	=1200	:6	=200	8662	" " + 72
XII	45-48	1200	+ " "	=1200	:6	=200	8893	" " + 58

These are the average figures, from which there may be slight departures, and yet children thrive best when they are most closely approximated. During the first month it is well to add about four grams of sugar to each 100 ccm. of milk, or still better a teaspoonful of malt extract.

(6). After the tenth month, and in many cases after the sixth, some artificial food, vegetable in character, may with advantage be allowed. At the age of one year the diet may be still further varied by giving broths, eggs, etc.

#### NOCTURNAL ENURESIS AND MOUTH-BREATHING.

Dr. Otto Koerner, of Frankfurt-on-Main, in "Centralblatt f. klin. Medicin," No. 23, p. 417, 1891, calls attention to the possible, and probable, relation between nocturnal enuresis and mouth-breathing, the latter being due to disease or growths in the naso-pharynx. He cites two cases where the removal of the naso-pharyngeal disease promptly arrested the nocturnal enuresis, which had taken place nightly for years. From his experience, he recommends

that in every case of nocturnal enuresis the method of breathing should be carefully ascertained. If there is mouth-breathing, its cause should be investigated, and, if possible, removed.

[Statistics upon this point can easily be gathered, and it is hoped that cases may be reported, for the question raised is an interesting one.]



## GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

Dr. Sicard has contributed to the "Revue de Thérapeutique Medico-Chirurgicale" for February an essay in which he calls attention to some of the rarer complications of chlorosis. Two of these, thrombosis and fever, seem to call for special consideration.

Veousseau pointed out years ago the danger of thrombosis, especially of the lower extremities—a true phlegmasia alba dolens. The same condition may cause acute cerebral softening by occurring in the cerebral arteries or nervous sinuses.

Phlegmasia may appear at any stage of the disease, but more often early, before the cachectic conditions have become developed. Fatigue is undoubtedly a predisposing cause. The course of the inflammatory action is slow, continuing from twenty days to two months.

The outset is signalized by local pain of moderate intensity, which rapidly becomes more severe until the patient is forced to go to bed. Fever is present and may exceed 104° F. There is white œdema of the part with extensive infiltration. Red and white streaks denote the inflammation of the cutaneous lymphatics.

Palpation causes severe pain and should be avoided, as any handling may release fragments of clot into the circulation and result in embolism.

The genesis of phlegmasia is far from clear, but probably results directly from the changed condition of the blood.

Treatment consists in absolute rest for the part and the administration of belladonna to relieve the pain, and quinine for the fever. The bowels should be looked after, as a loaded sigmoid flexure may induce the trouble by pressing on the left iliac vein.

## FEVER.

Dr. Molière was first to direct attention to fever as a complication of chlorosis. It is much more frequent than thrombosis and not so serious in its results, though it may do much harm by arousing, through a mistaken diagnosis, grave apprehensions as to the outcome of the case.

In nearly every case of chlorosis there is a slight rise of temperature, usually about  $100\frac{1}{2}^{\circ}$  F. The type, however, varies, in some cases there being a very perceptible oscillation in the temperature curve. Cases have been reported where the thermometer registered  $104^{\circ}$  F. With the cure of the chlorosis the fever disappeared.

The anæmia is almost always far advanced before the rise of temperature occurs. It can only be explained by some interference of the balance between heat production and heat dissipation.

In making a diagnosis it is a matter of much difficulty in certain cases to exclude tuberculosis. Loss of weight, emaciation, shortness of breath, and often a slight hacking cough are present, even before the fever. It would seem, however, that this difficulty could only occur when auscultation or the microscope have yielded negative results.

The treatment is mainly the same as we would use for the anæmia alone—well-selected iron preparations and proper regimen. If the temperature runs high, the wet sheet wrap, twice daily, has been found to be of advantage.

## LEUCORRHEA.

Dr. W. S. A. Griffith (British Medical Journal for April 25, 1891) defines *leucorrhœa* as a "discharge from the vulva of any abnormal fluid other than blood or urine." It may be mucus, serum or pus.

Leucorrhœa appears in three forms: 1st, normal secretion in abnormal quantity; 2d, a deviation from the normal, both in composition and quantity; 3d, normal, mixed with abnormal secretions.

The normal fluid is secreted by the glands and mucous membrane of the uterus. The vagina has no proper secretion, as it is lined with skin and not mucous membrane. It is possible, however, that there may be some transudation from its superficial vessels, even in health. The fluids from the uterus are often retained in the folds of the vagina, and after decomposition has taken place they change from an alkaline to an acid reaction.



This fact gives rise to the erroneous impression that there is a normal secretion in the vagina which differs in its chemical reaction from that of the uterus above.

The mucus from the cavity of the body of the uterus is precisely similar to that from the cervix, unless it be a little less viscid.

At the vulva the secretion from the glands of Bartholinus are added. The other vulvæ glands are sebaceous.

Leucorrhœa usually comes from an intra-uterine source, and is less often a disease than a symptom. Often no disease can be found in the organ from which it comes. The trouble is treated as a local rather than a constitutional one.

Enlargement of the uterus greatly increases the discharge by increasing the area of secreting surface. This is not the condition, however, with the majority of cases which we are called on to treat. It is almost never necessary to make a vaginal examination in virgins, and often not in married women.

In many cases treatment to the end of relieving the anæmia will prove to be all that is required. Of course, where there is an enlarged uterus, it should be reduced to its normal limits.

Vaginal irrigation may do much good in washing away retained and irritating secretions, but the cavity of the uterus is beyond reach.

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## DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

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### ALOPECIA AREATA : ITS PATHOLOGY AND TREATMENT.

Dr. Alfred Eddowes gives a fair résumé (*British Med. Jour.*, June, 1891, p. 197) of the remarks of Dr. Radcliffe Crocker in his introduction to the discussion of this subject at the meeting of the British Medical Association, Birmingham, 1891. He analyzed 207 cases of this disease which had occurred among 10,000 hospital patients, and another 50 selected from his private practice. He concludes from this analysis that this disease occurs most commonly under the age of twenty, a little less so between twenty and forty, and rarely in persons over fifty; also more common in males than females.

He makes four classes :

(1) Cases in which the disease is universal or general. (He says this is rare.)

(2) Cases where nerve injury is patent, or where it follows evident course of a nerve. (This also rare.)

(3) Those cases of "*alopecia circumscripta sen orbicularis*," as described by Neumann, which are characterized by atrophically depressed patches, which are small and which often show decrease in sensibility. (These cases very rare.)

(4) The numerically largest class is that to which he still believes the old name "*tinea decalvans*" by right belongs. In this class he has been unable to trace any connection between the disease and disturbance of the general health, except in few instances.

Among the fifty private cases, he had concluded that in only seven of them was there any warrant for believing neurotic origin probable.

He believes strictly that in the vast majority of cases this is a contagious disease, and gives some cases as affording probability if not proof of this.

Perhaps the last three of his six closing arguments are the strongest (in point of assertion) he makes :

(4) That in those countries where *tinea tonsurans* is most common, *alopecia areata* is also most frequent.

(5) Hence we must conclude that a large proportion of cases in adults which are termed *alopecia areata* are cases of bald *tinea tonsurans* (*T. decalvans*), which is acknowledged to exist among children, and that the old authors, Bateman, etc., etc., were justified in calling it porrigo, or *T. decalvans*.

(6) Finally, I believe that a parasite indistinguishable from that of the *trichophyton tonsurans* may be demonstrated in recent cases, and that the treatment most efficacious is inunction of powerful and stimulating parasiticide.

The doctor's remarks at the time created great interest, but were strongly opposed both by native and foreign dermatologists present, among whom we happened to be, the consensus both as to numbers and, we believe, weight of testimony was decidedly against Dr. Crocker's convictions.

ON THE EMPLOYMENT OF TUBERCULIN IN THE TREATMENT OF LUPUS, AND  
ON SOME OTHER NEW REMEDIES FOR THAT DISEASE.

P. G. Unna, Hamburg (British Jour. Dermatology, June, 1891, p. 174). This is title of address delivered before the Medical Society of Hamburg, March 31, 1891. The doctor therein makes a plea for suspension of opinion, and, nothing if not ingenious,

appears to give some good reasons therefor, especially as to treatment of lupus and kindred skin affections. The paper, which is too long to criticise in small space, is still worth reading as an elaborate defence of the now (it may be termed) obsolete method. He treated about forty cases in all, four being of leprosy and many of eczema. He claims that it has a distinctive action in some forms of eczema, which he calls tubercular eczema (phthical?), and a most beneficial one.

PSEUDO-REINFECTION SYPHILITIQUE—CHANCRE OF TONSIL—MULTIPLE SECONDARY SYMPTOMS, HYDROARTHROSIS SECONDARY—ERYTHEMA FROM ANTIPYRIN.

Dr. Paul de Moléncs (*Annales de Derm. et de Syph.*, May 25, 1891). An interesting and instructive case is detailed by the author, Dr. de M., on the above page and number of the journal of what would doubtless have seemed to many a positive case of reinfection of syphilis. He gives full history of the case, both prior (it having been formerly treated at the Hôpital St. Louis) and the sequent. It will repay perusal, and will emphasize Fournier's cautions as to easy acceptance of these reputed cases, which he, Prof. F., puts this way—that above all there should be three things rigorously noted and exacted:

(1) A history of indurated chancre, with indolent adenopathy of a pleiad of glands, then some weeks after a typical roseola and other symptoms and eruptions distinctively syphilitic in character, as alopecia, cephalgia, mucous patches, etc.

(2) Then complete absence of symptoms, or tertiary lesions for some years at least.

(3) Then must a new typical chancre make its appearance, after a recognized impure coitus, again with the characteristic adenopathy, and some weeks afterward, as before, *undoubted* secondary lesions presenting themselves in their regular chronological order.

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## MEDICAL JURISPRUDENCE.

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BY SIDNEY V. LOWELL.

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### RUPTURE.

Accidents to human beings producing the injury commonly known as "rupture," being a protrusion of part of the abdominal contents beyond their confining wall, may present some nice

questions of medical jurisprudence. Not long since I had such a case in my own practice. My client, a house owner, was sued by his tenant for damages for injuries received, as the latter alleged, through his default in failing to keep the rented premises in repair. The tenant claimed that an old-fashioned pit closet, with which plumbing had been connected, was insecurely covered, by reason of which he partially fell in and was so struck and injured as to produce a "rupture."

There was a good defence to the action on the merits—that is, on the point that the owner had not agreed to keep the premises in repair; without such express agreement the landlord would not have been liable; but there was the risk that the truth might not prevail, that the tenant's story, though false, yet might be believed by the jury, as it frequently happens that a jury is so deceived. The fact that the tenant had in some way sustained a rupture of the most alarming size was apparent from his person. How it happened could only be accounted for by himself. He had, however, refused to make any considerable use of a truss. It was undoubtedly owing to the latter cause that the rupture was of such a great size. It was so large as to menace his life, and if allowed to keep on extending at the rate it had progressed, it would surely cause his death.

I thought it prudent to pay several hundred dollars to settle the suit in which, while of right, there should have been no recovery, yet in which it was possible, and in which if the claim was sustained at all, it would be for a great sum. My opponent thought it prudent, too, to take the "bird in the hand."

It occurred to me all the time that the suit was pending that the question as to the amount of the recovery, if any, in the case would be a pretty one; that is, this point was, or was it not, to be considered, that the refusal of the injured man to constantly wear a truss prevented the consideration of the spread or growth of the rupture after the original injury. The general rule of law is that an injured party must take, if practicable, such a course of action as a prudent man would ordinarily do, to prevent the increase of his injury. There would be no difficulty in the case if the injured party had the means to procure a truss and failed to obtain and use it without cause. But in most cases, as assuredly in this, to use a truss causes pain to the user. Now how much pain is the sufferer bound to endure? This becomes a nice question entirely impossible to weigh beforehand in such a case. It will depend in practice purely on the judgment of the jury. It must be considered, too, that the person whose argu-

ment it is that the ruptured person should endure the pain of the truss, continually wear it, and practically live a life of endless suffering, is in a case like this the very person whose carelessness (if the action is maintainable at all) caused the injury. I am inclined to believe in the face of the testimony of the injured party that he found the pain of any long continued wearing of a truss unendurable, that an ordinary jury would find for damages based on the condition of the injured party at the trial. They would consider that the sufferer rather than the defendant should judge of what pain the former was called upon to endure.

I have been led to write on this subject through the decision recently made by the "Appellate Court of Illinois" in the case of Edward C. Sims against Andrew H. Parker. This was an action brought against a truss maker, who was also a physician, for damages for injuries received through the fitting by the defendant of a truss to the person of the plaintiff, and the hypothesis that he was suffering from a rupture, when in fact he was suffering from an abscess in the bowels. Here the wearing of the truss caused not only great suffering in its use, but the pressure and use of the truss were highly injurious to the wearer. The decision reached in the case was, that as it was proved that the defendant was skilful in his calling, that the fact that he made a mistake that might easily be made, did not render him liable; that the person employing a physician or similar person must take that chance. This is a very important matter for physicians, surgeons and others. The point, however, is by no means a new one, and the decision follows the course of medical jurisprudence. It may seem very grim law to a patient that the person employed by him as a skilled practitioner may entirely mistake his case, and perhaps cause his death by active means through a wrong diagnosis in a case where it was quite possible to make no mistake, yet the law is that the person employed is only bound to exercise ordinary skill and care in his treatment. It seemed pretty hard in the Sims case, that as his difficulty was from an abscess, which certainly was distinguishable from a rupture, he should not be able to recover for the mistake made.

My own idea of what the law should be, is, that "ordinary" skill should not be the test of liability in such cases, but that extraordinary care and skill should be required. The rule might lead to fewer practitioners, but this would, perhaps, not be altogether an evil.

## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.*

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By H. G. Piffard, A. M., M. D., Clinical Professor of Dermatology, University of New York, etc., etc., assisted by Robert M. Fuller, M. D.

This noble-looking volume of 157 pages of text, and fifty full page plates from photographs, and thirty-three illustrations in text is, we think, in many ways a valuable addition to dermatologic literature, and very certainly so as to dermatologic illustration; in fact, judging as impartially as we may, its chief merit would occur to us to be in the magnificent plates given, among which we may particularize as to the larger ones, Nos. 3, 4, 6, 10, 14, 18, 21, 22, 24, 25, 26, 29, 30, 31, 35, 39, 42, 48, 50; as to the smaller, Nos. 1, 2, 8, 15, 16, 25, 26 and 30. The work, as a whole, might at first be taken, considering the smaller relative amount of text, as descriptive of the plates, and therein contained lesions given, in contradistinction to the ordinary Treatise on Dermatology.

The author notably slurs Pathological Histology, both in the preface, where he calls particular attention to the fact, and in the consequent general omission thereof in the text.

He is consistent in this, as according to his declaration as to the confused views of writers on the subject above mentioned, he aims only at the practical side of the matter, though it may, and doubtless will, be thought a heresy by some. We confess, though not agreeing entirely, to having a fellow feeling with him in this.

Much originality and boldness of thought characterize some of the text, and although some of the subjects (of exceeding interest, too,) are treated baldly enough; others, as Eczema, are dwelt upon fully and, as we believe, in most excellent manner. His recommendations, advice, etc., as to therapy in general are not, in our opinion, full or wide enough, and we think, sometimes erroneous or leading to error. This last is, in our judgment, the weakest part of the book.

We could wish the "ample verge and margin" of the pages were filled with notes in very much smaller text—in fact, if there is no mechanical difficulty or impossibility, we would suggest that in future editions such marginal notes and references might be printed round the pages, directing attention to the choice literature, monographic and bibliographic, of the subjects just there treated on. It would seem to us an innovation that might be established by somebody, and by no one better than the learned author.

His chapter on Diagnosis, pure and simple, is excellent, and can be read with pleasure and benefit by all. Those on Eczema, Sarcoma, Seborrhœic Eczema (or, as he prefers to call it, Sudolorrhœa), Psorospermosis, etc., agree in the main with the views of the majority of American dermatologists, though in striking contrast with the opinions of some foreign, notably German, authorities. The volume will form a striking and valuable addition to the library of any medical man.

S. SHERWELL.

PRINCIPLES OF SURGERY. By N. Senn, M.D., Professor of the Principles of Surgery and Surgical Pathology, Rush Medical College, Chicago. 109 illustrations. F. A. Davis: Philadelphia and London, 1890.

Prof. Senn has completely and thoroughly demonstrated the necessity for, and the advantages of, writing an entirely new text-book upon the principles of surgery. The appearance during the past few years of edition after edition of the older text-books, each claiming to have been brought up to date, has led the progressive surgeon to purchase these, only to feel the keenest disappointment at the discovery that they, with the exception of but a few and unimportant additions, represent only duplications of what already occupied his library shelves. At the rate at which surgical pathology has advanced during the past few decades, the process of incorporation of a few new facts in brackets by an "editor," an addition here and there of a remark in an obscure foot-note intended to qualify or directly contradict a statement which is permitted to remain in the text precisely as it appeared in the original edition, or the publisher's trick of printing old matter upon heavier paper and making two volumes of what was originally published as one, thus trapping the unwary and filling the coffers of the book-makers, will no longer pass muster. Surgical diseases have been almost revolutionized in their pathology by the advancement of bacteriological investigations and the discoveries resulting therefrom, and he who expects, when he turns over the pages of a so-called "new edition" of an old text-book, to find it "brought up to date," may lay down the book with a feeling very much like that of a man who more than half suspects that he has been swindled. If this be true of the surgical practitioner, how confusing must be the perusal of such works to the student, be he ever so intelligent. The work before us comes, therefore, with a freshness comparable only to the breezy stir of the author's own City by the Lake.

On the other hand, had the writer of this exceedingly valuable work simply announced it as an account of some surgical diseases concerning which our views had undergone complete change during the past few years, there would have been but little to criticise. The general scope of the book is but a limited one, for one can scarcely imagine a surgical text-book which can be of the best service to the average student, and yet pays not the slightest attention to matters of such importance as syphilis, hernia, cutaneous diseases, tumors and diseases of the circulatory apparatus. But to call it a text-book upon the principles of surgery would be to perpetuate a misnomer, and perhaps lead to more than a few disappointments on the part of those who have in mind the seeking of knowledge upon subjects pertaining to surgical pathology other than those upon which bacteriology has a distinct and undoubted bearing. To be sure, the author apologizes in the preface for the absence of any reference to the subject of tumors, and promises to supply this deficiency in a special work to be shortly published. Yet in the previous paragraph he states his aim to have been to write a book "which should serve the purpose of a systematic treatise on the causation, pathology, diagnosis, prognosis and treatment of the injuries and affections which the surgeon is most frequently called upon to treat." If this object were to be followed up to its logical and practical conclusion, then the chapters upon tetanus, hydrophobia, actinomycosis hominis, anthrax and glanders might have been omitted altogether, and chapters upon fractures, dislocations, hemorrhages, deformities, as well as upon

those already noted as having been without mention, substituted with both consistency and profit.

If, however, Professor Senn's intention was to furnish the student with a clean-cut and intelligible account of those diseases which undoubtedly depend upon a bacteriological origin, there can be no two opinions regarding the success which has attended his efforts. He has certainly added another bright star to the crown of one who has already made himself famous for original investigation and practical application. But by virtue of this very success he has placed a well-defined limitation upon the scope of his work, and it is to be hoped that in future editions some modification of the title and the promise will place the work in its proper sphere; which latter will, in our opinion, neither detract from the credit due its author nor the usefulness of the book.

In the opening chapters general pathological processes are treated of in their relation to surgery. Among the most notable features of this portion of the work is that which relates to regeneration and inflammation. A well-directed attempt is made to simplify the subject by advocating the view that these are distinct and separate conditions, which should be no longer considered as identical or viewed from the same standpoint of etiology or pathology. To quote his own words, regeneration "includes the processes opened in the healing of wounds produced by a trauma, and in the restoration of parts damaged or destroyed by the action of chemical substances, extremes of cold or heat, and the various destructive inflammatory processes caused by the presence of specific pathogenic micro-organisms." In Chapter III. it is stated that the term inflammation "should be limited to the series of histological changes which ensue in the living body, from the presence and action of specific micro-organisms." In other words, it is simply a matter of destruction and reconstruction, the first-named process being dependent upon the damaging presence of bacteria, and the latter upon the fact that "each cell alient possesses an intrinsic vegetative power from the earliest embryonal development throughout life," and that this "enables it to produce its own kind, and never any other materially different histological structure." Should these distinguishing characteristics be accepted, the study of surgical diseases will be very greatly simplified, and much of the perplexity which results from the tendency among some teachers at the present day to confuse the phenomena which follow an injury with those following upon the presence and action of pathogenic micro-organisms will be avoided. In this manner, simple inflammations are spoken of as forms of disease in the same sense as inflammations caused by bacteria, as, for instance, those arising from the presence of the bacillus tuberculosis, etc.

The author follows his well-known and favorably received work upon surgical bacteriology, in the chapter on pathogenic bacteria.

In those chapters upon the surgical diseases caused by bacteria which follow, the same general lines have been pursued as in the former work, with the addition, in the work before us, of some remarks upon their clinical history and therapeutics. Remarking upon the localization of bacteria, allusion is made to the clinical observation made long ago by Von Volkmann, Halle's late distinguished professor of surgery, to the effect that a severe trauma seldom, if ever, gives rise to tuberculosis at the seat of injury; and, on the other hand, that in cases where tuberculosis develops in consequence of an injury, the trauma is always slight and sometimes insignificant. This is attributed to the fact that the active tissue-changes which occur following a severe traumatism



and in the reparative process counteract the growth and propagation of the bacillus. At the same time, attention is directed to the fact that a joint, already the seat of a tubercular inflammation, will illy bear the infliction of a fresh traumatism, such, for instance, as the application of *brisement forcé*; and, in addition, the danger of the production of general military tuberculosis should be borne in mind in this connection. In all instances in which a local tuberculosis develops in consequence of an injury, it must be taken for granted that either the injured tissues contained the essential cause of the disease, and that the lesions caused by the trauma created the conditions necessary for its reproduction; or the injured tissues, being previously free from bacteria, serve the purpose of a *locus minoris resistentiæ* for those which reach them through the circulation. This is confirmed by the experiments of Rosenbach, Kocher, Becker and Krause, to which reference is made and due credit given.

Necrosis is defined as a condition, not as a disease, representing, as a symptom, a local condition which has been brought about by different causes. Two chapters are devoted to its consideration. Following this are four chapters devoted to suppuration, in which the entire subject is most exhaustively treated. Here the student is treated to a most comprehensive view of the entire theme. The process is divided into acute, subacute and chronic, these terms bearing reference to the time required for the transformation of the products of inflammation into pus. A second division of the subject consists of a consideration of suppurative inflammation as it occurs in the different regions and tissues of the body, as, for instance, in mucous membrane and skin, in bones and joints, serous cavities, sheaths of tendons, in the brain, etc.

The chapters upon septicæmia, pyæmia and erysipelas are replete with new facts, the result of the most recent investigations upon these subjects. Probably no better description of infectious or suppurative osteo-myelitis than that given by Senn in the chapter devoted exclusively to this disease is to be found in the entire literature of the subject.

The growing interest manifested in the subject of surgical tuberculosis is shown by the fact that almost a fifth part of this entire work is devoted to this disease, as it occurs in the different regions of the body. A point made by the author, following Garné, relates to the fact that the contents of a tubercular abscess do not consist necessarily of pus, the latter resulting from an additional infection with pus microbes. Confidence in the anti-tubercular influence of iodoform is shown by the author's recommendation in this class of cases, after evacuation and antiseptic irrigation by means of an aspirator needle, of a ten per cent. mixture of this agent, applied to the abscess cavity.

Throughout the entire work, the author exhibits that combination of the acutely practical talent of the American, with the painstaking and labor-loving conscientiousness of the German—qualities that have made him one of the most successful teachers, authors and surgical practitioners of our day. Well informed, indeed, must be the reader who after careful perusal of this book does not lay it down with the feeling that he has added largely to his already existing knowledge of the diseases of which it treats.

GEO. RYERSON FOWLER.

## MISCELLANEOUS.

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### MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

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The October meeting of this association at St. Louis promises to be one of the most interesting and valuable in its history.


The local committee of arrangements at St. Louis includes the representative men from all the colleges, of the local societies, of the medical journals and all the varied interests of the profession.

The Chairman, Dr. I. N. Love, extends a cordial invitation to the readers of the Journal to be present.

St. Louis is noted for her warm hospitality, and the profession this year are determined that everybody who comes to the meeting, October 14th, 15th and 16th, at the Pickwick Theatre, St. Louis, shall not have come in vain.

For information regarding the meeting, address the office of the Committee of Arrangements, Grand and Lindell Avenues, St. Louis.

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### MANAGEMENT OF LABOR IN ECLAMPSIA.

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REPORT OF A CASE, BY CHARLES JEWETT, M.D.

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An Italian woman was brought into the lying-in department of the Long Island College Hospital in convulsions at the ninth month of pregnancy. Two or three days before admission she had been seen by Dr. W. J. Cruikshank. As she spoke Italian only little or no history had been obtained. Finding her suffering from uræmia and in imminent danger of convulsions with no conveniences for home treatment he advised her to enter the hospital. This for some reason she failed to do. The doctor was summoned again and found the patient in convulsions. How many paroxysms had occurred it was impossible to learn. When admitted to the hospital the woman was cyanotic and totally unconscious. One convulsion occurred after admission. The patient was placed under chloroform, a quarter grain of elaterium was administered by the stomach and fifteen drops of veratrum viride given hypodermically. On examination the os internum was found obliterated, the external os barely beginning to dilate.

Dr. Townsend, the obstetric interne pushed the dilatation as rapidly as possible with the fingers in the cervix. The patient however was steadily sinking and by the time the cervix was little more than half dilated she had ceased to breathe. Artificial respiration and other restorative measures were used but to no purpose. When the mother was evidently moribund we were confronted with the necessity for active interference to save the child. The choice of procedure lay between post-mortem Cæsarian section, forceps, with incisions of the cervix if necessary to facilitate extraction, and podalic version. We chose the latter. The child was rapidly turned and was extracted just as the mother expired. It was easily resuscitated and left the hospital a few days later well and thriving. This case is of interest in connection with the general question of the management of labor in eclampsia. It is an accepted rule of practice that the evacuation of the uterus is indicated on the occurrence of puerperal convulsions at whatever stage of pregnancy. Now and then it happens to the great peril of both patients that the delivery is impeded by reason of a rigid cervix; very rarely the labor does not even begin. Halbertsma in a recent paper advocates Cæsarian section in cases where the labor is not established after the onset of convulsions. He has twice operated successfully and he cites four other Cæsarian sections which have been done on this indication in Holland. In the six cases all the children and all the mothers with a single exception were saved. When labor has begun but delivery is hindered by rigidity of the cervix he practices multiple incisions of the cervix after Dührssen. This method I used recently with success in a case of nephritis at the fifth month complicated with uncontrollable vomiting. In another case at term one of the incisions was extended into the cavity of the uterus by a tear which nearly invaded the peritonæum. This accident is always liable to occur and liability to rupture of the uterus is a serious objection to the method. Still another danger is hæmorrhage. Hæmorrhage is controllable however by suture. In fact immediate suture of the incisions should be the rule whether there is bleeding or not. The method adopted in the case just reported is competent without incisions in many cases of undilated cervix. Delivery by the feet under these circumstances is often accomplished with surprising facility, a cervix apparently undilatable sometimes yielding easily to the wedge-like action of the inverted fœtus.

## TREATMENT OF MORPHINOMANIA.

Two steps in advance have recently been taken in the provision for the treatment, in an institution, of morphine and allied narcotics. One is in England, the other in America. Under the Lunacy Act of 1890 morphine or other inebriates may be received as voluntary boarders into licensed houses for the insane, with the consent of two Commissioners of Lunacy or two justices, by simple applications, without specifying the cause for which the applicants desire to be admitted. The American step is the opening of a home at Brooklyn for the reception of twelve habitués of morphine, cocaine or chloral, of whom one-fourth are to be free patients, if an endowment fund of £12,000 can be raised for the latter purpose. The treatment pursued is preliminary sedation by sodium bromide, and a rapid reduction of the narcotic, the period of reduction averaging from ten to twelve days.—*Brit. Med. Jour.*

## NEW JERSEY STATE MEDICAL EXAMINATION.

The following were the questions of the Medical Examining Board of New Jersey at a recent meeting of that Board :

SECTION I. *Materia Medica and Therapeutics.* (William L. Newell, M. D., Examiner.)

1. What medicines are incompatible with cinchona?
2. What preparations of quinine are best adapted to subcutaneous use?
3. Give a test for iodide of potassium.
4. What is chloroform? What are its physiological effects?
5. What is the treatment for an overdose of aconite?
6. What are the vegetable acids?
7. What are the physiological effects of the salts of lead?
8. What are the physiological effects of mercury and its salts?
9. Write a prescription containing a salt of lithia, and give the pathological condition intended to be relieved.
10. What are the officinal preparations (and dose of each) of opium and its alkaloids?

SECTION I.A. *Homœopathic Materia Medica and Therapeutics.* (A. M. Worthington, M. D., Examiner.)

1. Explain methods of preparing medicines by attenuation, solution and trituration, by the decimal system.

2. Give a brief botanical description of gelsemium semper-virens.
3. What are the laryngeal symptoms of hepar sulphuris?
4. Name the remedies of greatest value in acute articular rheumatism.
5. What are the lung symptoms of phosphorus?
6. Give the heart symptoms of convallaria majalis.
7. Name the indicated remedies for parenchymatous tonsillitis—primary and suppurative stages.
8. Describe the characteristic diarrhœa of croton tiglium.
9. Differentiate the skin symptoms of thuja occidentalis and graphites.
10. Give the abdominal symptoms of veratrum viride.

SECTION II. *Obstetrics and Gynecology.* (Dr. Brown, Examiner.)

1. What is natural labor?
2. How many stages in a natural labor, and how are they divided?
3. Give the treatment of the third stage of a natural labor.
4. What are the functions of the placenta?
5. Give indications for and methods of inducing premature labor.
6. Give the treatment of abortion.
7. What are the differences between the male and female pelvis?
8. Give the symptoms and treatment of puerperal eclampsia.
9. Give the symptoms and treatment of uterine polypi.
10. Give the causes, symptoms, and treatment of rupture of the perineum.

SECTION IV. *Physiology.* (D. R. Atwell, M.D., Examiner.)

1. What is a proximate principle? Give classification of the same.
2. What are the functions of the retina and iris?
3. What is the function of the placenta?
4. Give the normal surface-temperature of the body, and name influences which produce variation from the normal.
5. What forces keep the blood in circulation?
6. For what do the lacteals and mesenteric veins serve?
7. Give the percentage composition of human milk.
8. For what does the skin serve?

9. Give the physiological properties of the pneumogastric nerve. Over what organs does it preside?
10. Describe the excretory process of the kidneys.

SECTION V. *Anatomy.* (A. Uebelacker, M.D., Examiner.)

1. Describe the humerus.
2. Describe the shoulder-joint.
3. Enumerate the muscles of the acromial, anterior and posterior scapular regions.
4. Describe the patella and muscles attached to it.
5. Give origin, course, and divisions of right carotid artery.
6. Describe the external jugular vein.
7. Describe the vertebral artery.
8. Describe the radial artery.
9. Describe the ophthalmic nerve.
10. Describe the tongue.

SECTION VI. *Surgery.* (Hugh C. Hendry, M.D., Examiner.)

1. State the recognized fractures and dislocations of the head of the humerus, and give the differential diagnosis of each.
2. Give symptoms, diagnosis, and treatment of backward dislocation of the elbow.
3. State the recognized fractures of the head of the femur, and give the differential diagnosis.
4. Give the immediate symptoms and remote effects of a severe concussion of the spine in the lumbar region.
5. Treatment of wounds: Describe the antiseptic methods as at present employed. Give the names of several antiseptics and the manner of using them.

SECTION VII. *Chemistry.* (Eugene Tiesler, M.D., Examiner.)

1. Give three tests for sugar in urine.
2. What is the difference between slacked and quick lime?
3. Give tests for arsenic in solution.
4. By what methods are volatile oils obtained, and how do they differ from fixed oils?
5. What is alcohol? How is it produced?
6. In what form is mercury present in the unguent. hydrarg. ciner.

7. Define bismuth subnitrate. How is it prepared? Give properties.

8. What is spirit mindereri? How do you prepare it?

9. What is oil of vitriol?

SECTION VIII. *Histology, Pathology, and Diseases of the Eye and Ear.* (H. G. Wagoner, M.D., Examiner.)

1. Describe muscular tissue.

2. Describe nerve tissue.

3. Give the lesions characteristic of typhoid fever.

4. Give the pathology of arsenical poisoning.

5. Give pathology of acute, chronic, and tubercular meningitis.

6. Give the pathology of lupus.

7. Describe hypertrophy of the heart, without and with dilatation.

8. Give symptoms and treatment of furuncle of the external auditory canal.

9. Give causes, symptoms, and treatment of purulent ophthalmia.

10. Explain exophthalmic goitre, symptoms and causes.

SECTION IX. *Hygiene and Medical Jurisprudence.* (A. H. Worthington, M.D., Examiner.)

1. Name the diseases that may be caused by drinking impure water.

2. What method would you advise to destroy the disease-producing germs that impure drinking-water may contain?

3. What is the normal quantity of carbon dioxide in the atmosphere, and what proportion in the air is sufficient to cause sudden asphyxia?

4. What is the difference between an antiseptic, a deodorant, and a disinfectant?

5. Name the acids, acetic, boric, carbolic, and salicylic, in the order of their strength as germicides.

6. What are the ordinary signs of death?

7. How soon after death is the best time to make a post-mortem examination for medico-legal inquiry?

8. How would you distinguish an ante-mortem bruise from a post-mortem ecchymosis?

9. State the chief distinctive marks to determine the sex and probable age of a human skeleton.

10. How would you diagnose alcoholic coma from apoplexy, or an injury to the brain?

## VAGINAL HYSTERECTOMY FOR PELVIC SUPPURATIONS.

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BY M. SEGOND, M. D.,

Société de Chirurgie.

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(Translated by T. H. Manley, M.D.)

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It is now many months since M. Paën proposed to the Academy and later, at Berlin, to treat pelvic suppurations by vaginal hysterectomy. It was said to be more benign and efficacious than laparotomy, besides produced more definite results.

His views did not meet with much approbation at first, and it was regarded with distrust until lately. I myself partook of this mistrust. But I was called to a case which demanded laparotomy, and as it could not be practiced, I recommended a simple incision into the vagina. M. Paën was called in consultation, and operated in my presence, performing a vaginal hysterectomy, with the result that I was converted. Since then I have operated twenty-three times.

I shall speak first of my deaths. M. Paën announced, at Berlin, sixty cases; all recovered.

Less happy is my record; four died of my twenty-three cases. By a singular freak of fate, three of them in succession, viz., Nos. 12, 13 and 14. The first and last were large women, on whom operative procedures were extremely laborious. On the 12th the fundus of the uterus was very high, and I left a pocket of pus—probably the cause of a septic pneumonia—which carried her away on the sixteenth day. The third patient, as the first, died on the twelfth day, without any elevation of temperature. No autopsy was held.

My fourth failure, and last, was in a case of tubo-ovarian implication of a tuberculous origin. She died of a subacute peritonitis, on the fourteenth day.

An autopsy was denied here, though I believe she died of a perforative peritonitis.

As to these nineteen cases, I would observe that in all these the women were in a very grave condition, requiring laparotomy. Among them was one coming to Paris in great distress, and I was surprised she arrived here. Another had had her uterine adnexa removed by laparotomy. It is now some days since I made my twenty-fourth operation on a woman afflicted with a fibroma, extending up to the umbilicus. I removed this fibroma by morcel-



lation, opening collections on the way. The operation lasted three hours, and she made a good recovery.

What are the indications for this method?

They seem to me very clear. In every case when pyosalpingitis is present and we must make a bilateral castration. Bilateral castration is important, for castration by the vaginal passage is necessarily total.

I know sometimes we may curette away material and drain pus-pockets by laparotomy. But occasions requiring this procedure are rare, and should not be allowed to weigh in the balance.

The manual of operation is of capital importance. It resembles in nothing that performed for cancer and that for fibroma. We must follow the manual of Paën exactly and in every particular. The long forceps of Richelot are to be rejected, because they press the broad ligament in stages while morcellating the uterus.

M. Paën recommended the left lateral position. It is convenient only when the uterus is within easy reach. But when the uterus is high up, the dorso sacral position seems to me better, and for antiseptics is preferable.

The vagina is incised, its walls disengaged. The bladder and rectum are to be protected, and one makes a sort of tearing (gratage) close to the uterus until the cul-de-sac of the peritonæum is reached. When we have isolated a little of the uterus, we compress and cut the part corresponding to the broad ligaments. We now slit in two halves the body of the uterus. This facilitates considerably its displacement downward. We now by slow stages remove the entire organ in fragments. The removal of the uterus is sometimes immediately followed by a free discharge of pus.

Occasionally, however, if it does not appear, one introduces a finger and searches for pus accumulations, and breaks them up; but we must absolutely avoid disturbing recent adhesions and the septic annexes.

This ablation may be made whether pus be present or not, as it is simple, sure, and is not performed in the dark.

I have not had an opportunity to compare this method with that in which the adnexa are removed through sacral passage.

In comparison with laparotomy it has four advantages. The first two are absence of a cicatrix and the ultimate inutility of an abdominal belt.

These may seem trivial, but they are highly appreciated by the patient. But, above all, I believe the prognosis is better.

Certainly, I do not oppose my twenty-three operations before thousands of laparotomies for pelvic suppurations practiced almost daily. And I know for simple cases laparotomy is safe, but vaginal hysterectomy is as much so. For complex cases laparotomy sometimes gives remarkable results, but it is incontestably grave, because in detaching the adhesions, pus will enter the peritoneal cavity. Independent of adhesions in the way, by this passage one can effect perfect drainage. The wound cicatrizes rapidly, and I believe the cure is radical. Surely, with my few months' experience, I am not able to speak of definite results. But we have, unhappily, all of us, seen women after laparotomy for salpingitis still in great pain, with hæmorrhages and leucorrhœa, for which we must often curette. It is hoped that this will not be the result in those treated by total vaginal hysterectomy. (*Le Mercredi-Médical*, 4 Mars, 1891.)

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### CARE OF THE NEWLY-BORN.

BY FRANCIS H. STUART, M.D.

[*From The Trained Nurse.*]

When should the newly-born babe be washed?

Each one will answer this question intelligently if a little thought is given to the condition under which the infant comes into the world. Before birth it has lived in a temperature that is absolutely uniform. Its respiration has been through the warm blood of the mother, conveyed to it by the placental circulation. The course of the fœtal circulation and its sudden change at birth is also a factor of some importance. The susceptibility of the tender infant to all violent and sudden impressions must be remembered. The transfer from its "nest" to contact with the external world constitutes in itself, even when the utmost care is taken, a most violent shock. It is true that nature has provided so that some portion of this may be a positive benefit to the young infant, human as well as animal. But the requirements in this are of brief duration, and cannot possibly exceed the time that is consumed in tying the "cord" and severing the child from the placenta. Any unnecessary time thus consumed, and certainly any deliberate exposure of the child to the chill of even a warm summer day is detrimental and hazardous.

As soon as possible the infant should then be wrapped in a warmed flannel blanket and even its head covered. Its face does

not need to be exposed to the air; sufficient air will reach the lungs through the blanket. One who has practiced this rule, as I have for over ten years, has the confidence born of experience, to insist upon it being carried out. As a result the infant is comfortable, does not feel the sudden change from intra- to extra-uterine life. It is so comfortable that it sleeps, as a rule, for a number of hours, often five or six, after being thus comfortably cared for. It is my habit to direct that, after the mother has been made comfortable, bandaged, dressed, etc., the infant's face should be wiped off with warm water (including a careful washing of its eyes), that it should be rubbed all over with vaseline or sweet oil (this being done under the blanket, without at all exposing it to the air), and then a napkin put in place. The navel need not be touched until after the baby has been washed; nor need a binder be put on till then.

The washing of the infant should not be done for ten to twenty hours after its birth. My rule, if a regulation so lax can be called such, is to allow the infant to sleep as long as it remains quiet. When it becomes restless, I suppose from hunger, it is to be fed with warm sweetened water, and if it then sleeps again, well. If not, it may be washed and dressed. The washing should be in a warm room, with *warm* water, and be done quickly. It is not necessary to *scrub* a baby the first washing, as if it were never to be washed again. It is better to allow three or four washings for the removal of all of the vernix caseosa,—the white, cheesy coating which covers most infants at birth. An infant thus cared for is very much less apt to have a rough or excoriated skin, than if less care is taken with its first washings.

To sum up:—Let the young life be guarded from shock in every possible way, by every possible care. Let it learn one thing at a time. It is enough that its first hours should only be given to breathing, and that a warmed air. Keep it warm at all times. Wash it quickly and tenderly. Feed it regularly, and not at haphazard, whenever it stirs or even cries.

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### JENNER AND SMALL-POX.

BY I. N. BRAINERD, M. D.

[From the *American Lancet*.]

Edward Jenner, 1749 to 1843. Can mortal tongue tell the value of Jenner's discovery of protection from small-pox by vaccination?

By means of this discovery small-pox is no longer the dreaded disease it used to be. Of every one thousand persons not protected by vaccination, and having small-pox, about two hundred die; while of every one thousand persons who have been vaccinated and yet have small-pox, only about fifteen die—a saving of one hundred and eighty-five lives per thousand. Of ten persons not vaccinated, all are liable to take the disease; while of ten persons vaccinated, only two are liable to take the disease at all. The pitted faces and blinded eyes add further value to the discovery. For this “masterpiece of medical induction,” honors were conferred upon Jenner by foreign courts, and he was elected an honorary member of nearly every learned society in Europe. In 1802, Parliament voted him a grant of £10,000, and in 1807 another of £20,000.

For centuries before Jenner's time vaccination with small-pox virus was practiced. Subsequent legislation in England has prohibited that practice. It is worthy of remark that a sermon written in 1722 is extant which claims that Job's affliction was confluent small-pox, inoculated by the devil.

At the present day a small but noisy party of anti-vaccinationists has arisen, whose arguments are about as senseless as that of the divine. They are represented by Rev. Ralph Fothergill, once pastor of the Primitive Methodist Church in Fall River, Mass., who died of small-pox, leaving a wife and five children, four of whom were sick with the disease at the time of his death. He would not be vaccinated himself, nor allow his family to be. For another example I cite to you the small-pox epidemic in Montreal five years ago. “The Roman Catholic Church forbade vaccination and defied the medical board; and every day crowds went to mass when crowds meant dissemination of the plague. No sanitary precautions were taken. The only preventives to which the masses had recourse were little round pieces of paper bearing the imprint of the Virgin Mary, which were blessed in bulk by the archbishop of the diocese, and were sold by the priests to their flocks. These they stuck on their breasts, or swallowed. The result was that the French Canadians died by thousands, while the English-speaking citizens escaped with comparatively small loss.

BROOKLYN VITAL STATISTICS FOR APRIL, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population, estimated, April, 1891,	862,155	The number of births reported was	1187
In the month of April there were		The number of marriages reported was	597
2494 deaths, the rate of mortality being 35.19 per 1000 of population.		The number of still-births reported was	142

The mortality by classes and by certain of the more important diseases was as follows :

*Causes :*

1. Zymotic, - - - -	282	Malarial Diseases, - - - -	13
2. Constitutional, - - - -	318	Diarrhœal Diseases (all ages),	16
3. Local, - - - -	1679	"    "    (under 5 years),	7
4. Developmental, - - - -	166	Phthisis, - - - -	199
5. Violence, - - - -	49	Bronchitis, - - - -	256
Measles, - - - -	23	Pneumonia, - - - -	689
Croup, - - - -	41	All Respiratory, - - - -	1078
Diphtheria, - - - -	67	Bright's Diseases, - - - -	41
Scarlet Fever, - - - -	51	Puerperal Diseases, - - - -	23
Typhoid Fever, - - - -	11	Old Age, - - - -	52
Whooping-Cough, - - - -	25	Suicide, - - - -	9

*Reported Cases :*

Diphtheria, - - - -	190	Measles, - - - -	424
Scarlet Fever, - - - -	263	Typhoid Fever, - - - -	40

Deaths by sex, color and social condition were as follows :

Male, - - - -	1275	Native, - - - -	1553
Female, - - - -	1219	Foreign, - - - -	941
White, - - - -	2455	Married, - - - -	779
Colored, - - - -	39	Single, - - - -	1265
Widows, Widowers, and not stated,			450

Still-births, excluded from list of deaths, were as follows:

Males, - - - -	72	} Total, - - - -	142
Females, - - - -	70		
Deaths in public institutions, -	195	Homicides, - - - -	
Deaths in tenement houses, -	731	Suicides, - - - -	9
Inquest cases, - - - -			179

*Age Periods :*

Deaths under 1 year, - - - -	460	Total deaths, 5 to 20, - - - -	170
"    "    5 years, - - - -	373	"    "    20 to 40, - - - -	440
Total deaths under 5 years, -	833	"    "    40 to 60, - - - -	450
		"    "    60 and upwards, -	601

Certain foreign and American cities show the following death-rate for the month of April:

Brooklyn, - - - -	35.19	Vienna, - - - -	26.02
New York, - - - -	37.45	Paris, - - - -	27.61
Philadelphia, - - - -	23.47	London, - - - -	20.24
Berlin, - - - -	18.78	Glasgow, - - - -	31.56
Dublin, - - - -			28.02

## BROOKLYN VITAL STATISTICS FOR MAY, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population estimated, June 1st,	862,155	The number of births reported was	952
In the month of May there were 1651 deaths, the rate of mortality being 22.55 per 1000 of population.		The number of marriages reported was	446
		The number of still-births reported was	144

The mortality by classes and by certain of the more important diseases was as follows :

*Causes :*

1. Zymotic, - - - -	251	Malarial Diseases, - - - -	2
2. Constitutional, - - - -	313	Diarrhoeal Diseases (all ages),	8
3. Local, - - - -	913	"    "    (under 5 years),	7
4. Developmental, - - - -	138	Phthisis, - - - -	201
5. Violence, - - - -	36	Bronchitis, - - - -	94
Measles, - - - -	40	Pneumonia, - - - -	295
Croup, - - - -	28	All Respiratory, - - - -	452
Diphtheria, - - - -	69	Bright's Diseases, - - - -	34
Scarlet Fever, - - - -	57	Puerperal Diseases, - - - -	25
Typhoid Fever, - - - -	9	Old Age, - - - -	35
Whooping-Cough, - - - -	8	Suicide, - - - -	4
Cerebro-Spinal Meningitis, - - - -	6		

*Reported Cases :*

Diphtheria, - - - -	163	Measles, - - - -	432
Scarlet Fever, - - - -	304	Typhoid Fever, - - - -	36

Deaths by sex, color and social condition were as follows :

Male, - - - -	869	Native, - - - -	1067
Female, - - - -	782	Foreign, - - - -	584
White, - - - -	1614	Married, - - - -	463
Colored, - - - -	37	Single, - - - -	949
Widows, Widowers, and not stated, - - - -	239		

Still-births, excluded from list of deaths, were as follows :

Males, - - - -	74	} Total, - - - -	144
Females, - - - -	70		
Deaths in public institutions, - - - -	184	Homicide, - - - -	
Deaths in tenement houses, - - - -	536	Suicide, - - - -	4
Inquest cases, - - - -			155

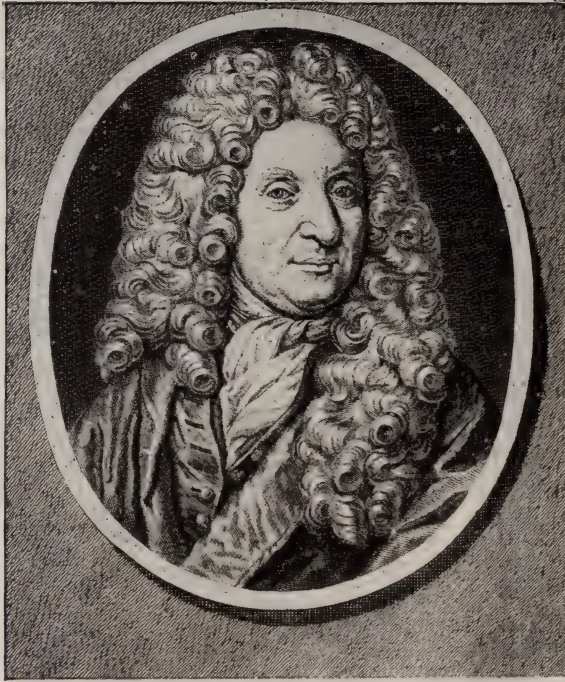
*Age Periods :*

Deaths under 1 year, - - - -	289	Total deaths, 5 to 20, - - - -	170
"    "    5 years, - - - -	311	"    "    20 to 40, - - - -	308
Total deaths under 5, - - - -	600	"    "    40 to 60, - - - -	274
		"    "    60 and upwards, - - - -	299

Certain foreign and American cities show the following death-rate for the month of May :

Brooklyn, - - - -	22.55	Vienna, - - - -	28.90
New York, - - - -	26.16	Paris, - - - -	26.60
Philadelphia, - - - -	22.10	London, - - - -	22.32
Berlin, - - - -	20.33	Glasgow, - - - -	27.95
Dublin, - - - -			24.20





**BERNHARDUS ALBINUS,**

*Medicinæ Theoretico-Practicae*

*Professor Lugd. Bat.*

Bernard Siegfried Albinus is to be regarded as the first anatomist of his age, having held the anatomical professorship in the University of Leyden for nearly fifty years; and his great work on the anatomy of the muscles, which is one of the chief ornaments of the writer's library, has probably never been excelled or ever equaled by any modern work.

His father, Bernard Albinus, whose true name was Weiss (or anglicised White), was one of the most celebrated physicians of his time.

The subject of our portrait was born in Frankfort in 1697. He received his first instruction from his father, who was his predecessor the professor of anatomy in the university, and from those other great teachers who made Leyden at the time so famous as a centre of medical learning; Ran, Bidloo and Boerhaave. In 1718 he visited France and was while there the pupil of Winslow and Senac, but was at the expiration of but six months recalled to Leyden by the curators of the university to lecture on anatomy and surgery in the place of Ran, who had died; and he received the degree of M.D. without an examination; and in 1721, on the death of his father, was chosen to succeed him as the professor of anatomy.

His first publication appeared in 1725 under the title of "*Index Suppilictis Anatomiae Ravianae*," in which he pays a handsome tribute to his learned master Ran, whose labors only he pretends to give in this work, although it contains many observations the result of his own experience. The following year he put forth his well known work on the bones, and in 1734 his great monumental work: *Historia Musculorum Hominis*, a volume of twenty-five folio plates, executed with the greatest care, showing the muscles in 320 different figures, with direction of fibres, attachments and connections.

Haller, notwithstanding his constant disputes with the author, declared this work "the best ever executed in anatomy;" and modern illustrators have not excelled it. He published many more anatomical works, several of which are illustrated on an equally grand scale, and the fidelity of his delineations and descriptions are universally allowed.

Besides being the author of so many original works he edited an edition of the works of Harvey, the anatomies of Vesalius and Fabricius at Aquapendente, and the fine anatomical plates of Eustachius.

He died in 1770 at Leyden at the age of 73.





because they interfere with the persistent use of what your deliberate judgment approves. The folly of attempting to settle this question by reference to the experience and practice of those who have reported cases of success or failure in their attempt to resuscitate the asphyxiated is clearly set forth in the following words taken from Dr. H. C. Wood's address before the Tenth International Medical Congress: "Death is so near and so terrible, time so absolute, moments so important, that no surgeon would be willing or justified in waiting for the effect of any one remedy; and when a man is dosed with alcohol, nitrite of amyl, hypodermic injections of ether, digitalis, atropine and other powerful agents; faradised, slapped, douched, stood on his head, subjected to chest movements for artificial respiration, and various other measures too numerous to mention; who can tell, if perchance he recover, why he has done so? or who can point out, if perchance he die, what is the remedy whose omission or commission has led to the fatal result?" Gentlemen, you are all of sufficiently large experience to have participated in these periods of breathless suspense. It has fallen to my lot to be familiar with the entire history of anæsthetics from its inception, and to have been present in many cases when the subjects were in imminent peril. Happily, however, I never saw a death under these circumstances. The nearest I ever came to it was in a case which I reported in the *New York Medical Journal*, March, 1858, p. 293. The very brief salient points of this case may be worth repeating here, since, if there has been any other case asphyxiated by chloroform and resuscitated after thirty minutes of apparent death, I have failed to see the record. The patient was a feeble Frenchman. Case, necrosis of femur and spontaneous fracture. Amputation at upper third by Dr. Nelson Drake, beside whom there were present Dr. Isaacs, Dr. Turner, Dr. Wm. Otterson, Dr. George Cochran and myself. I administered the chloroform, a sample of which was afterward examined and found to be impure. The amount of blood lost was neither slight nor excessive. Just as the last artery was tied the patient seemed to be dead without a warning symptom. I performed artificial respiration persistently, as nearly as possible according to the directions of Marshall Hall, taking care to roll the patient from side to side as often as three times per minute, as well as to compress the lower part of the chest vigorously every few seconds. All the above-named physicians were witnesses to the fact that a full half hour passed before the first sign of life showed itself—Dr. Isaacs holding his watch the while. The drawing forward of the tongue, bathing the head, slapping the face with wet cloths, camphor and

ammonia to the nostrils were, of course, not neglected; but practically the one means relied upon was artificial respiration, supplemented by the rolling motion, which latter may have some effect in delaying coagulation and thus aiding to re-establish the circulation. These measures were not remitted long enough to examine the heart. No pulse could be felt, and there is no doubt had the efforts at resuscitation been stopped long enough to determine whether any cardiac movement could be perceived no pulse would ever have been felt. The hypodermic syringe was then a thing of the future.

Many experiments and observations have been made with the view of ascertaining which function is first abolished by the inhalation of chloroform, ether and nitrous oxide respectively. The records are both indefinite and contradictory, probably because it may be one function or the other that may first yield to the toxic influence, or it may be both simultaneously.

Those physicians who have made their observations only upon the *genus homo*, will be very ready to testify that when the critical moment came and the question of life or death stared them in the face, they did not take long to listen to heart-beats or count pulsations, or question scientifically and coolly the *modus operandi* of the toxic agent they had been dealing with, and that they didn't care which function got ahead of the other, so that one of them started and the other followed.

Nitrous oxide, as an anæsthetic, being almost entirely restricted to the shorter operations of minor surgery, and withal presenting such marked and startling symptoms of any impending danger or disaster, has a record so nearly free from mortality, notwithstanding the fact that in the United States alone it is administered annually to more than 750,000 persons, that I should be justified in leaving it out of consideration here; yet as there seems to be in some quarters a growing tendency to use it more frequently than heretofore in the longer operations, we ought in that event to be prepared for any consequences that may arise. In only one case have I availed myself of it in an operation of thirty minutes' duration. It was then administered by Dr. Brush. The patient, a young lady, went into general convulsions of clonic character, and frightened me prodigiously if they did not endanger her. There were, however, no ill effects subsequently shown. Dr. Brush was not alarmed; said he had witnessed the same effect before and no harm came. I confess that I should not be willing to repeat the experience, and I do not believe many such cases could occur without a large percentage of deaths. In the use of this agent,

there being no toxic element introduced, the anæsthesia is due only to the shutting off of oxygen. Without doubt, therefore, when asphyxia supervenes, the rapid supply of oxygen to the blood is the only chance for relief. Artificial respiration it seems to me should be supplemented by oxygen from a cylinder whenever practicable. Chloroform and ether demand our more serious attention. The best conclusion that I can reach from all the facts in the case is, that although chloroform lessens from the start the force of the heart, and ether from the start acts as a cardiac stimulant, when the state of narcosis is reached, the essential conditions of the system are not so greatly at variance as to call for marked differences in the method and means of resuscitation. Without doubt some of the deaths during an otherwise safe anæsthesia are either simply coincident or purely accidental. Examples of the first being of the class of sudden dissolutions from unknown causes, such coincidences must be very rare, but we cannot deny their possibility. The examples of purely accidental death are such as are produced by the excitements of the anæsthetizing process acting upon a system which has suffered some degenerative changes, such as atheromatous deposits and absorption in the walls of vessels, giving rise to apoplexy or other internal hæmorrhages. Of course any attempt at resuscitation in these cases of either class must be futile.

Since "to be forewarned is to be forearmed," it may be well at this point to state some of the causes, remote, proximate, predisposing or exciting, that occasion asphyxia. These I shall not attempt to classify, for they strangely run into each other.

1. There is special susceptibility and special insusceptibility of individuals, so that ten drops of chloroform will put one to sleep and two ounces administered in the same manner will fail to anæsthetize another.

2. It has long been remarked that negroes, and especially mulattoes, are easily overdosed by chloroform or ether.

3. Chloroform is not only stronger and quicker in its lethal power, but it is more persistent than ether in its hold upon the nervous system, which is probably due to its less volatile nature.

4. A man intoxicated with alcohol is easily anæsthetized, but a sober alcohol habitué is generally markedly insusceptible to both ether and chloroform.

5. There is more danger and there are more deaths in cold than in warm climates from chloroform and ether narcosis. Dr. Wood suggests that this is probably due to the more rapid elimination of the anæsthetic under the influence of a warm atmosphere.

It may also be due to the inhalation under the same influence of a more attenuated vapor.

6. Loss of blood and possible syncope greatly increases the risk of the anæsthetic state.

7. Anxiety and fright and the element of suffocation all increase the risk of over-action of an anæsthetic. It is, therefore, important to get and to keep the confidence of the patient from first to last if possible.

8. Rapid breathing, either as the voluntary act of the patient, or as the result of nervousness, calls for especial care on the part of the anæsthetizer lest insensibility and asphyxia be simultaneously induced.

9. Carelessness and inattention, or oftener the inexperience of the administrator, may lead to a fatal result. The best safeguards against such a risk are, to give in our hospitals and medical schools constant and careful teaching as to the responsibility of the person who administers an anæsthetic, and never to assign to this duty any one who has not had such teaching, together with ample opportunity to observe cases under the care of those who are already initiated.

In reference to the direct means to be employed for the resuscitation of the asphyxiated, artificial respiration will, of course, hold its place as the *summum bonum* of all methods, and in what little I shall say of other means I shall not forget to emphasize the fact that this *sine qua non* must never yield for half a minute to any other agent or method however good in itself. Above all, never stop working to see if your patient is dead. If he is, you will know it quite soon enough.

In a few instances the hypodermic use of ether has been reported, but it is an example of isopathy that I cannot too strongly condemn. How could it have any effect except to deepen the narcotism? Alcohol used in the same way is open to the same criticism, and this not only on theoretical grounds—the experiments of R. Dubois and of Dr. H. C. Wood tend to the same conclusion. The latter authority, to whose address before the Tenth Medical Congress I am indebted for many points of interest, experimented upon dogs with hypodermic injections of atropine, caffeine, nitrite of amyl, alcohol, ammonia, digitalis and strychnine.

Atropine, caffeine and nitrite of amyl gave no sign of beneficial influence. Alcohol in small doses had no perceptible effect; in larger doses seemed to hasten the fatal result. Ammonia had a slight influence upon the heart; while digitalis, of all the agents

tried, "had most effect in stimulating the failing circulation, and strychnine seemed to be of great value in these cases, because while it has some influence upon the circulation, it effects powerfully the respiration."

Prof. Wood expresses his surprise that while everybody thinks first of chloroform as an antidote to strychnine, nobody has used strychnine as the antagonist of chloroform.

Several years ago Nélaton announced that a very effective means of resuscitation from asphyxia, particularly after chloroform, was to invert the patient; and it was said that he took the hint from his children, who amused themselves by anæsthetizing mice, and then while holding them up by the tail the mice would revive. I do not vouch for the story. The practice has been followed in numberless cases and often with apparent benefit. It has been supposed that a more ready supply of blood to the brain was the reason for any possible advantage of this position; but this explanation has been called in question, on the ground that the respiration fails, not because of a lack of blood in the respiratory centres of the nervous system, but because of a poison in the blood which paralyzes those centres; and experiment has very clearly demonstrated that frequent changes of position are more likely to be of benefit than any maintenance of the perpendicular inversion.

Raising and lowering the inferior extremities can be done by an assistant without in the least disturbing the process of artificial respiration.

To what extent electricity may be advantageously used in these cases I do not know, but I hope the facts will be brought out in the discussion, which, by the way, may perhaps profitably take a wider range than a strict response to my question would give it. The somewhat desultory character of my paper would certainly justify it.

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## REPORT OF A CASE OF APPENDICITIS.

BY GEORGE WACKERHAGEN, M.D.

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Read before the Brooklyn Surgical Society, April 3, 1891.

I was called to Bay Ridge on the night of November 8th to see a lad, aged six years, who had been eating largely of grapes on the preceding day. On the evening of the 7th he came home complaining of severe pain in the stomach and abdomen. He was

also vomiting, and had frequent painful movements from the bowels. The severe pain finally subsided, and by the following morning, Saturday, November 8th, he was quite free from pain, excepting at long intervals, and at these times he did not appear to suffer very severely. On the night of the 8th, however, the pain had so greatly increased that at 6 P.M. I was requested by telephone to come as soon as possible; but I was at that time engaged; I did not reach the house until 9 P.M. In the meantime a physician had been called, who prescribed an opiate, which produced sleep. When I reached the house he was sleeping quietly.

From the appearance of the abdomen there seemed to be considerable tympanites, but as I did not wish to disturb him then, I did not make any further examination. His temperature was  $101\frac{1}{2}^{\circ}$ , and the pulse 116 (sleeping).

I left directions to apply a warm poultice to the abdomen, and, on being informed that he had eaten a great deal of other food since the last movement of the bowels, prescribed an emulsion containing 3 iii castor oil, to be administered as soon as he should awake. The patient awoke with pain shortly after my departure, and the poultice was applied and the emulsion of castor oil was given about 10 P.M. Pain was not severe during the night, and when I arrived in the morning I found him comparatively free from pain, though the oil had not operated.

*Nov. 9th.*—Temperature at 8 A.M.  $101^{\circ}$ , pulse 116. Called again in the afternoon at 3.30 P.M.; found that he had had severe pain at 12 M., with more swelling of the abdomen, but was free from pain at the time of my visit. He slept quietly until 1 A.M., when he awoke with slight pain. The bowels had moved at 11 P.M. on the previous night, and he slept until 4 A.M., when he had another copious movement of the bowels. After this, he slept quietly until 7 A.M., when he complained of slight pain in the right side, and as the nurse had been instructed, she administered four drops of McMunn's elixir of opium. Temperature at this time was  $98^{\circ}$ , pulse 104. The nourishment administered consisted of Valentine's beef juice and peptonized milk. He complained of pain every two or three hours, which was paroxysmal in character. McMunn's elixir was continued every two hours in two or three drop doses.

*Nov. 11th.*—Temperature  $98\frac{1}{2}^{\circ}$ , pulse 104; and he was very comfortable until 6 P.M., when the pain was so severe that it was necessary to administer four drops of McMunn's elixir.

*Nov. 12th.*—There was little or no pain during the day. Temperature in the morning  $98\frac{1}{2}^{\circ}$ , pulse 104; evening,  $99\frac{1}{2}^{\circ}$ , pulse 108.

*Nov. 13th.*—His condition remained about the same, little or no opium being required; temperature nearly the same morning and evening.

*Nov. 14th.*—The pain on the right side, that is, over the region of the cæcum, still persisted, although it was not severe at any time. Temperature in morning  $99^{\circ}$ , pulse 108; evening  $99\frac{4}{5}^{\circ}$ , pulse 110; had taken no opium.

*Nov. 15th.*—As the bowels had not moved since the morning of the 10th, I ordered a wineglass of citrate of magnesia, to be followed by enema. The tympanites almost entirely relieved, although there was some pain on pressure all over the abdomen. The bowels moved freely at 3 P.M. on that day, and all pain disappeared excepting the slight pain on pressure in the region of the cæcum. Until the 19th of November there was nothing remarkable in his condition, and his improvement had been progressive; at this date, however, in the evening, the temperature arose to  $101\frac{1}{2}^{\circ}$  and the pulse to 114, with increased pain and general tympanitis. On the morning of the above date the bowels had been moved by enema, which seemed to produce great exhaustion. I could now feel, but very indistinctly, a deep indurated tumor in the right inguinal region, just above and to the left of the right anterior superior spinous process of the ilium, and also noted retraction of the thighs. The situation of the painful area was quite marked, but in very close proximity to the inner side of the anterior spinous process. Nothing could be determined by the rectum. I now decided that an operation ought to be performed, and Dr. F. Lange was called in consultation for confirmation of my opinion.

Dr. Lange saw the patient with me on the afternoon of the 19th of November. It was now determined that the operation should be performed on the following day. In the evening of the same day the temperature went down to  $98^{\circ}$ , and the pulse to 112, and his general condition was apparently very much improved; no exhaustion, appetite good. On the morning of November 20th the temperature was  $96\frac{1}{5}^{\circ}$ , pulse 88, good appetite, no prostration, general condition good; the patient frequently expressed a desire for food. Pain only slight on pressure over the region of the cæcum, and no tympanites.

The operation was appointed for 2.30 P.M., and when I arrived he was still in apparently good condition, although the pulse had increased to 108, temperature  $96\frac{1}{5}^{\circ}$ . No prostration or symptom of collapse; on the contrary, the little patient was quite active in bed, so that he had to be restrained from moving from side to



side, being quite impatient that he was not allowed to eat and drink. Notwithstanding all this, the slight induration and pain on pressure still continued in the right inguinal region. I would here state that there was no chill at any time.

An incision was made at 3.30 P.M. over the most prominent seat of induration, about one inch and a half to the left of the anterior spinous process, and after dividing all the tissues until I arrived at the indurated surface, I introduced a small aspirating needle, but, after three perforations, did not succeed in finding pus. Dr. Lange, who kindly assisted me, also used the aspirator several times, but was unable to reach the abscess. Upon his advice, I continued the incision deeper and in an upward direction, when a small abscess was opened, with discharge of pus and blood. This abscess was situated behind the ascending colon. Upon introducing the finger into the wound, another smaller abscess was opened behind the cæcum. At the bottom of this last cavity the appendix could be indistinctly seen perforated and firmly fixed by adhesions. The lower part of the abscess cavity was then explored, and it was found necessary to make a counter-opening through the lumbar region, through which a drainage-tube was passed. The dressings were as usual in such operations, and were renewed every second, then every third, and after the 1st of December, every fourth day.

After the operation the temperature ranged from  $96\frac{1}{2}^{\circ}$  in the morning to  $98\frac{1}{2}^{\circ}$  at night, sometimes to  $99^{\circ}$  at night. The general condition has been good, the bowels have been moved by enema every third day until the 4th of December, when he had two natural movements, without pain. He sleeps well at night, and is allowed all solid food which is of ordinarily easy digestion.

Since the above date he has continued to improve, and is now entirely recovered.

The disease in this case evidently originated in the appendix, which was reflected behind the head of the colon, the slight elevation of temperature from time to time indicating the extent of the inflammation, which was prevented by adhesions from extending to the general peritoneal cavity.

The obscurity involving the early stages of this disease is its most prominent and peculiar feature; and it is impossible, unless there is marked general peritonitis or symptoms of collapse present, to determine its location.

In the above case the child was extremely sensitive, exclaiming upon the slightest touch upon any surface of the body, and his statements, for the above reasons, could not be very reliable; his

abdomen had been frequently tympanitic from gaseous accumulation in the intestines.

The temperature was not at any time above  $101\frac{1}{2}^{\circ}$ , and the tenderness not marked at any given point in the early stage of the disease, but general all over the abdomen, the pain and tympanites disappearing with normal temperature for two or three days, the bowels at the same time moving freely. Such a case, indeed, requires more than ordinary care and diligence to determine the proper time for operation.

It appears to be generally agreed that there are no positive rules applicable to all cases which will enable us to determine the propriety of operative procedure. There seems, however, to be an intuitive knowledge acquired by some surgeons who have been careful observers which does guide them to a correct opinion on this important question. I wish to state here that from my experience in the treatment of these cases, I am decidedly opposed to the use of the exploring needle until an incision has been made to determine the peritoneal relation as well as the relation of the intestines, in order that we may be certain that we are not wounding or infecting tissues which are in a healthy condition.

The knife used with deliberation and cautious procedure is much to be preferred to groping in the dark with an aspirating needle, and by the method of explorative incision we may determine the actual pathological condition most positively.

The only guide to the point where an incision should be made when there is induration is over the centre of the indurated point, if this can be determined by rectal and external palpation, and unless this point of induration can be found, or there are symptoms of perforation or a marked general peritonitis, an explorative incision should not be made at all.

This patient was carefully and most intelligently watched by one of the best trained nurses in Brooklyn, as soon as symptoms of typhlitis presented, and it is her faithful watching of the case that enabled me to arrive at precise conclusions.

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#### NEW YORK STATE SOCIETY FOR RAILWAY SURGEONS.

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The first meeting of this Society will be held in the parlors of the Hotel Bensonhurst, at Bensonhurst-by-the-Sea, L. I., October 27, 1891. A full attendance is desired. Programmes of the meeting may be obtained by addressing Dr. Geo. Chaffee, 201 47th St., Brooklyn.



The father of modern physiology. It will be impossible in the limits of this short sketch to more than hint at the multitude of works of this remarkable man, of whom it has been said: "No individual, either of ancient or modern times, has equaled him in the extent of his erudition and the magnitude of his labors."

Our hero was a precocious child: born at Berne in 1708. At the age of nine he had composed for his own use a Chaldaic grammar, a Hebrew and Greek lexicon, and a historical dictionary containing upwards of 2,000 articles extracted from the works of Morer and Bayle.

When but thirteen years old he lost his father and his fortune, and abandoning the church for which he was being educated, he took up the study of medicine.

He also manifested a taste for poetry and was the author of several very creditable poems. At fifteen he had written tragedies and comedies and an epic poem of 4,000 verses.

He was a student of Camerains and Duvernoy at Tübingen, and afterward under Boerhaave, Ruysch and Albinus at Leyden. He visited London and enjoyed the friendship of Douglas, Cheseldin and Sir Hans Sloan, at that time president of the Royal Society. Afterward he went to France to study anatomy under Winslow and Le Dran, but being prosecuted for dissecting dead bodies, was forced to leave the country.

On his return he was given a professorship in the University of Göttingen, where he soon acquired great popularity; and to him the Anatomical Theatre, the School of Midwifery, the Chirurgical Society and the Royal Academy of Sciences at Göttingen owe their origin.

He was offered professorships at Oxford, at Utrecht, at Halle and at St. Petersburg. The king of Sweden conferred upon him an order of knighthood, and the emperor of Germany honored him with a personal visit; but he continued his labors at Göttingen until failing health compelled his retirement, at the end of six years; and during this time he wrote and published no less than forty-three books, but his monument is his work on physiology in eight quarto volumes, written in Latin; and the research displayed in them may be estimated from the catalogue he gives at the end of books used in its composition. The list occupies 100 pages, and at the beginning he observes that he has omitted countless brochures, and has only enumerated as works referred to those which he had in his own library.

Had his book been nothing else than a record of all facts and opinions known up to his time, it would have been a work of the greatest value, and a monument of enormous knowledge.

He collected ten volumes of *Bibliotheca Anatomica, Chirurgica, and Medicinæ Practica*, which no library or bibliophile to-day can afford to be without.

Besides this he contributed original observations to almost every branch of physiology, and established a doctrine identified with his name, which has survived him, and continues to exert an influence on medical speculation—the doctrine of *irritability*.

He collected a most extensive library of nearly 20,000 volumes; he formed also an extensive herbarium; wrote diaries and left behind him nearly 150 manuscripts; and the whole of these were purchased by the Emperor Joseph and given to the University of Pavia.

He died at Berne in 1777, in the seventieth year of his age.

He viewed the approach of death with the calmness of a philosopher. "My friend," said he to the physician who attended him, "I die, my pulse has stopped," and then expired.

In person Haller is described as tall and majestic, and of a serious and expressive countenance. He had at times an open smile, always a pleasing tone of voice, usually low and seldom elevated, even when he was most excited. He was fond of unbending himself in society, and was on these occasions remarkably cheerful, polite and attentive; he was free of pedantry and would converse with the ladies on fashions, modes of dress and other trifles, with as much ease as if always accustomed to intercourse with general society.



## HÆMOPTYSIS.

BY E. S. MCKEE, M.D.,

CINCINNATI.

Pulmonary hæmorrhage occurring in elderly persons, not associated with tuberculosis or cardiac affections, is discussed by Clarke.<sup>1</sup>

Vascular alterations occur in elderly persons of the arthritic diathesis, and resemble the vascular alterations found in osteoarthritic articulations, and are of themselves of an arthritic nature. This variety of hæmorrhage is aggravated or maintained by the frequent administration of large doses of strong astringents, by the application of ice bags to the chest, and by indulgence in liquids to allay the thirst created by the astringents.

The treatment apparently the most successful in this class of cases is diet, quiet, restricted use of liquids, stilling of cough, calomel and salines, alkalies with iodide of potassium, and frequently renewed counter-irritation. Colchicum is recommended by Y. Spencer<sup>2</sup> in this class of cases.

That the comparative value of the two circulations—the pulmonary and the systemic—has been generally overlooked, is the claim of Andrew,<sup>3</sup> who proves to us that the pulmonary vasomotor system which, though apparently less developed than the corresponding systemic mechanism, is capable of exercising a decided control upon the flow of blood through the lungs. The author thinks that if it is of great importance to relieve blood pressure in hæmoptysis, then aconite ought to be a much more efficient remedy for that affection than ergot.

Sainsbury<sup>4</sup> argues that ergot and digitalis will increase the blood pressure and contract the bleeding vessel; whether bleeding will continue or be checked will depend on whether the rent is situated too near the heart or sufficiently near the capillaries. The difficulty in the treatment of hæmoptysis is that we cannot look inside and see whether we are dealing with hæmorrhage from a vessel of considerable size, possibly from an aneurismal dilatation, or whether it is a capillary hæmorrhage which we have to check. Until we can determine these points, we treat hæmoptysis at random.

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<sup>1</sup> N. Y. Med. Record, Dec. 28, 1889.

<sup>2</sup> Canada Practitioner, April 16, 1890.

<sup>3</sup> Lancet, Nov. 8, 1890.

<sup>4</sup> British Medical Journal, Oct. 26, 1889.

## RECENT PROGRESS IN INFANT FEEDING.

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Report of the Committee on Pædiatrics of the Medical Society of the County of Kings. Read at the meeting of June 16, 1891. Committee: E. H. Bartley, M.D., James McManus, M.D., and Jerome Walker, M.D.

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The study of infant mortality has been, and will continue to be, one of the most important questions of preventive medicine. It is conceded that in large cities improper food and feeding are an important element in this mortality. Food unsuitable either in quantity or quality may cause serious disturbances in nutrition, or even fatal results.

Normal human milk is the only proper food for young infants known, and all substitutes for it should be made to imitate it as closely as possible, both in chemical composition and in digestibility. These axioms we believe to be well established. Within the past few years there has been considerable activity in attempts to furnish a substitute for mother's milk. Various suggestions have been brought forward as to how this may be done, and chemists have worked patiently, with partial success only.

Sooner or later the most of these foods have proven failures, and physicians have returned to cow's milk; until there is to-day a general tendency to the belief that, so far, anything like an adequate substitute for mother's milk has not been prepared. Until within recent years the analyses that had been made of human milk were erroneous, and all attempts to imitate this composition were based upon faulty notions of what is needed.

More recently analysis has shown us more exactly just what human milk is, and we think since that time we have made more progress toward finding a nearer substitute. We have learned also that an ultimate chemical analysis is not a reliable guide in preparing a proper food. It is not enough that we prepare a food having  $3\frac{1}{2}$  per cent. of fat, 2 per cent. of albuminoids, etc. Equally important is the digestibility of these ingredients. This fact has been lost sight of by nearly all manufacturers of infant foods, hence their lack of success. Food in which milk does not enter as a preponderating element may be dismissed without discussion.

The most of those where milk is the basis contain some foreign substance, introduced as a diluent, to coincide with the idea, quite prevalent, that the curd must be broken up by some inert sub-

stance like starch, dextrin, gelatin, gum, peptones, maltose, etc., etc.

All these substances are foreign to the natural food of infants, and some are positively harmful. The idea of partially or wholly peptonizing the albuminoids was at one time thought to be a great gain. This has been found to be beneficial in some cases for a short time, when the quantity of peptone produced is not too great; but, clinically, it does not seem to be meeting with the success anticipated. The difficulties of keeping milk foods in a moist condition made it necessary to reduce them to a powder form. This practice is found to be objectionable, because it will be shown later that the curd of milk, when evaporated to dryness, undergoes certain changes which render it less digestible than when in the natural state. Again, even in the solid state, the fat of milk becomes rancid and unpalatable.

Either some preservative must be added or the fat must be removed and some other fat or some carbohydrate, as sugar or maltose, substituted for it. This is unnatural, and clinically not a success. These are a few of the difficulties to be overcome in the preparation of an artificial infant food, and the objections to the various attempts. By dint of advertising in store windows, by flooding physicians' offices with samples, and supporting medical and quasi medical journals, these foods find sale and no difficulty in securing the support of physicians who are too ready to write commendatory letters and certificates.

We find, however, that those who have given much time and study to this subject are more than ever inclined to return to slightly modified cow's milk as the sheet anchor. That pure cow's milk is not entirely satisfactory is proven by the presence of these artificial foods in the market.

Why it is not satisfactory is shown by the analyses of human and cow's milk. So far as we now know, the principal differences between the two are that in mother's milk the sugar is approximately one and a half times that of cow's milk, while the total albuminoids is one-half as much, and the salts one-third as much. Moreover, the albuminoids of human milk consist of two-thirds albumen and one-third casein. While in cow's milk the coagulable casein comprises four-fifths and the albumen one-fifth of the total albuminoids. In other words, human milk contains slightly less than one per cent. of casein while cow's milk contains over three per cent.

In human milk we find the largest part of the albuminoids in the form of albumen and not casein. As this albumen is not pre-

cipitated by rennet or acid, we can readily see why the curd produced by human milk is so small.

It is necessary, therefore, to dilute cow's milk in order to reduce the proportion of casein to that of mother's milk, with two and a half parts of water. The use of cream to supply the necessary fat has been an old one. Also the sweetening of the mixture.

Empirical mixtures of cream, milk, water and sugar have been used by some physicians for years. Biedert was the first to attempt to prepare scientifically such a mixture with the aid of chemical data. He based his mixture upon erroneous data. To Arthur V. Meigs is due the credit, in 1886, of demonstrating that a mixture of cream, milk, water, lime water and milk sugar could be prepared which should agree very closely in behavior and analysis with his analyses of human milk. This mixture, as improved by Rotch, of Boston, was certainly a marked advance in the empirical mixtures that had been in use before this. It is based upon careful analyses of human milk and of the mixture. Moreover, those who have given it a thorough clinical trial agree that, for infants under six months of age, it stands the test better than any other artificial mixture known to us.

The results are more uniformly good than with any other food we have ever employed. When the digestive powers of the infant have developed, say at the eruption of the first four or six incisors, our experience leads us to believe that milk slightly diluted will give a healthier and better growth than Meigs' cream mixture. The above-mentioned mixture will not agree with every stomach; neither will human milk. Stomachs are peculiar, and very slight changes in the food will cause marked disturbances of the digestion.

J. Lewis Smith advises milk heated for two hours to 180 to 190° F. Flour, sewed in a tight muslin bag, is boiled for seven days in water to convert the most of the starch into dextrine. A gruel is made from this, of the strength of a heaping teaspoonful to eighteen teaspoonsful of water. For children over six months he mixes this gruel with an equal volume of milk (*Archiv. Ped.*, 1889, p. 848).

Keating advises Rotch's formula if parents will take the trouble to prepare it.

Among the poor he uses cream and water, equal volumes, with the addition of a level teaspoonful of white granulated sugar to six ounces. He then sterilizes for one hour. If the child be less than four to six months old, he uses less cream than water. He says



lime water should not be added to milk before or after sterilizing. He prefers the lactophos. of lime in preference to lime water.

Whatever the composition of the food we propose to use, it should, if possible, be fed in a sterile condition.

If we return to our standard food—human milk—we find it to be free from micro-organisms, while market milk, as we all know, is well on toward the acid decomposition when it reaches the consumer.

In order to preserve milk from souring, the practice of boiling has been resorted to for years. The bad effects of sour milk are too well known to be dwelt upon. To prevent the possibility of a child getting sour milk is a great desideratum, but this should be done in some way that shall not render the milk unwholesome or indigestible.

Sterilization by heat is the best method with which we are acquainted.

Soxlet in 1886 applied the principles of sterilization to milk in a practical way, so as to bring it into a form that could be used in every house. Since then it has, fortunately, become very popular, and has taken firm hold upon the professional mind. It is popular because clinical experience has supported it.

The usual method of sterilizing is to subject the milk in small bottles to boiling water or to steam. This process is known to destroy the lactic acid bacillus, but not its spores.

It is found next to impossible to completely sterilize milk at 212° F., but the lactic bacilli are killed, and if the milk is used within a reasonable time, the other organisms do not cause any serious decomposition. If, however, the milk be kept too long, a putrefactive change may take place, with the production of an unpleasant odor and taste, and with the production of leucin, tyrosin and a small amount of peptone.

It is possible, perhaps, that certain bodies of the ptomaine series may in time be produced. When this does occur, if at all, it is not within a few days. Owing to the fear that such changes might occur, it is best that the milk be used within five or six days, although it must be admitted that so far as the committee are aware no case of ptomaine poisoning from the use of sterilized milk has been reported. We believe that if the proper care be taken in the management of the cows, and of the milk during and after milking, we should have very little trouble with the putrid fermentations.

Great care ought to be exercised in the care of the food, air, and surroundings of milch cows.

Prof. Conn in an article in the Report of the Secretary of the Connecticut Board of Agriculture, 1891, directs farmers to never feed hay to cows in the milking-room, as it fills the air with germs of fermentation. The committee has tried the experiment of having twelve bottles, previously sterilized and provided with air-tight tops, filled by milking directly into them. The udders of the cows and the milkman's hands were carefully disinfected with chlorinated soda solution, and the greatest possible care taken to close the bottles at once. Four of these bottles were kept at the room temperature and soured in twenty hours. The other eight were placed in an ice-box and soured in about forty hours. This shows that whatever pains be taken the milk cannot be kept without sterilizing. There are, however, certain objections to the ordinary method of sterilizing milk or cream mixtures, in the fact already referred to in connection with condensed milk and evaporated milk foods. When milk is heated to  $75^{\circ}\text{C}$ . ( $167^{\circ}\text{F}$ .), the sugar and albuminoids begin to undergo decomposition, which increases as the temperature rises above this toward  $212^{\circ}\text{F}$ . When kept at this temperature, the sugar begins to caramelize and give the boiled milk taste, and the milk turns yellow. The casein loses its property of coagulating with rennet (curdling ferment), and the albumen is precipitated. This last change may be shown by the following experiment: If we sterilize at  $212^{\circ}\text{F}$ . one of two samples of the same milk and then curdle both samples with a few drops of acid, and filter, we get more curd from the sterilized portion than from the raw sample.

On boiling the whey we find almost no albumen thrown down in the sterilized sample, while there is a very considerable curd formed in the raw whey. That is, the lactalbumen of the sterilized sample is nearly all precipitated by weak acid, and hence by the gastric juice. The curdling ferment of the gastric juice, as above stated, does not readily curdle the casein, but the acid does. The curd is not so easily digested in sterilized as in the raw milk. This is also proven by an experiment with artificial gastric juice.

In the experiments of Leeds (*Jour. Am. Chem. Soc.*, Feb. 1891), he found in peptic digestion, after digestion for six hours at  $43^{\circ}\text{C}$ . ( $109.4^{\circ}\text{F}$ .) and then allowing to stand over night, six per cent. of the casein in raw milk and seventeen per cent. in sterilized undigested. With pancreatic digestion, he found thirty per cent. in raw and seventy-six in sterilized as undigested residue. It will be observed that the difference in both cases is very marked. In the last case, however, there is some doubt as to the exact figures, but the relative proportions are probably correct.

Sterilization does not seem to have much influence upon the fat globules, but several observers have stated that the fat of sterilized milk is not quite so thoroughly assimilated as in raw milk. This may be due to the fact that in most instances where sterilization has been practiced the market milk has been employed, and, as we all know, market milk is partially churned before it reaches the consumer and contains minute lumps of butter. When the milk is heated these lumps melt and come to the top in a mass that it is next to impossible to incorporate with the milk again. For this reason the milk should be sterilized as soon after milking as possible and before the cream has separated.

In the case of cream mixtures, the committee have noticed as the result of experiment that centrifugal cream is less liable to separate from the mass than when the cream used is obtained by hand skimming. We would advise, therefore, that the cream should be separated by centrifugal machine immediately after milking, and the cream and milk mixed in the proper proportions at once and sterilized. We recommend that the sterilization be done at the farm, if at all, and before creaming, churning or partial decomposition have taken place.

Another objection to sterilized milk is that both cow's and human milk contains a peculiar soluble ferment which has the property of liquefying starch, although it does not change it to sugar. This ferment is destroyed and precipitated by a temperature of 106° F. and upward. The purpose of this ferment in the food of nurslings is evident, as it is to assist in the digestion of starch when taken with milk. This probably is the reason why children can manage starchy foods, and why foods containing barley water, oatmeal, farina, imperial granum, etc., are so often borne by infants.

This ferment, or its albuminous basis, may be seen as a sediment in the bottom of the bottles in which the milk has been sterilized.

Experiments have been made with a lower temperature than 212° F. to ascertain if it is not possible to secure the keeping of milk without producing the above-mentioned chemical and physical changes in the albuminoids, and with some success. It has been found that if milk is heated to 155 to 160° F. and then suddenly cooled, the lactic acid bacilli are so inhibited or attenuated that they do not readily reproduce. If this process be repeated once or twice without exposure to air afterward, the milk is preserved for a number of days and without losing its fresh milk flavor or suffering decomposition.

An apparatus called a Pasteurizer, operating upon this principle, has lately been introduced into this country, which it is hoped will be of great assistance in the handling of milk. It is certainly a desideratum to have a method of sterilizing milk sufficiently to prevent souring without the drawbacks of the present method.

By the addition of a small quantity of phosphate of soda and lime water before sterilizing, the albuminoids, especially the casein; are held in solution more completely, and the casein preserves its property of coagulating with rennet. This statement is based upon the statement of Haliburton (*Jour. Phys.*, vol. ii., p. 449), and has been confirmed by your committee.

The reaction of sterilized milk is usually neutral or slightly acid. If lime water be added in small amount before sterilizing, it enters into combination with the sugar, and possibly a part of the casein or albumen during the heating, so that the milk is absolutely neutral after sterilizing.

Experiments conducted by the committee show that the addition of lime water before sterilizing does not affect the question of the amount of soluble albumen in the product. It is a matter of indifference, then, whether the lime water is added before or after sterilizing, unless it be thought advisable to feed lime water as such. The reaction of human milk is either neutral or slightly alkaline, but not with lime water, probably with an alkaline phosphate. Free lime water generally has a constipating effect, which is somewhat obviated by the combination with the sugar. The addition of phosphate of soda and lime water is therefore to be recommended before sterilizing, in preference to adding it at the time of feeding, as usually recommended.

Lime water is not sterile, and especially when kept in the air of many of the rooms of the tenement-houses. Through the courtesy of Dr. Van Cott this point has been determined experimentally.

The statement has been made by Dr. E. F. Brush that cane sugar is a more suitable sugar with which to sweeten the milk for infants, claiming that artificial milk sugar is not identical with that found in the milk, that it is not assimilated and passes into the urine and fæces. Tests made with the urine of two infants, aged five and six months respectively, and fed exclusively upon cream food sweetened with lactose, shows no trace of sugar in the urine. Theoretically and practically, I see no reason to coincide with the views of Dr. Brush. H. Moexrel, of Hamburg, prepares the milk by the addition of distilled water and fruit sugar. This fruit

sugar is inverted cane sugar prepared by a patent process. This milk, according to report, has been highly commended by the physicians of Hamburg. I see no good reason for using this sugar, as it is very easily fermentable, and as milk sugar is very completely assimilated in the mixtures in which it is used.

Dr. Brush is not very much in favor of sterilizing milk. He claims by that process that the food is devitalized, and intimates that it is a question whether it is a good thing to give an infant dead food!

Not only should the food be of proper composition and sterile, but a certain amount of intelligence should be used in giving it at the right time and in the right quantity. Over-feeding is a common fault in hand feeding, much to the detriment of the infant. Within the past few years this matter has received accurate study, and we now have some definite knowledge upon which to base our directions to the mother or nurse.

The rule can be laid down that the stomach capacity in infants is very nearly in direct proportion to the body weight. At birth the stomach capacity in the average infant is about one fluid ounce, or thirty to thirty-five c.c. It increases quite rapidly for the first three months and then more slowly. The quantity to be fed at a time gradually increases from birth (3 i) to the age of one year (3 viii), while the interval between the meals may increase from two hours during the first week to three or even four hours. The total quantity fed in twenty-four hours will vary from ten to forty ounces.

Should we make the milk stronger in any one of its ingredients as the child grows older? Nature answers this question in the negative. There is a very slight difference in composition of human milk as lactation advances, but it seems inappreciable.

Generally, therefore, if a certain food agrees with the baby, do not change it too readily. Changes in the baby's food are apt to be dangerous, especially during the heated term.

Regularity as to quantity, interval between feedings, quality and composition of a baby's food are essential to its successful nourishment.

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## THE NEW LAW REGULATING THE PRACTICE OF MEDICINE.

Chap. 507, laws of 1890, which went into effect Sept. 1, requires all physicians not yet registered, to undergo an examination by the State Boards of Medical Examiners.

GASTRO-ELYTROTOMY—AUTOPSY OF CASE OPERATED  
ON BY A. J. C. SKENE, M.D., IN 1877.

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BY RICHARD SLEE, M.D.,

Assistant to the Department of Physiology, Hoagland Laboratory, Brooklyn, N. Y.

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The histories of many cases within the domain of modern surgery are never completed from a pathological point of view.

Most of the patients recover and pass from under observation, and of those that die, comparatively few are examined after death, so in a number of cases the pathological portion of the history has to be determined with more or less uncertainty while the patient is under treatment, or, as is not infrequently the case, during the short space of time occupied in the operation.

This being the case, it is most interesting and instructive to be allowed, after the lapse of fourteen years, to complete the history of one of the most difficult operations of modern times, viz., a successful gastro-elytrotomy, with very peculiar complications, performed by Prof. A. J. C. Skene on June 23, 1877, a description of which was published at that time, and is now reproduced at the close of this article. It was the second successful operation of the kind on record up to that date. Both were performed by Prof. Skene.

After the discharge of the patient from the Long Island College Hospital in 1877, she was lost sight of until she reappeared in Bellevue Hospital on September 24, 1888, and was placed in the fourth medical division, Dr. Walter Gillette being then visiting, and Dr. Alexander Lambert resident physician. To both of these gentlemen Prof. Skene feels greatly indebted for the specimen which is here described, and for the lucid history of the case.

From the history she gave them they recognized the case as having been under Dr. Skene's hand, and when she died, removed the pelvis with the pelvic organs and sent them to Prof. Skene, together with the following history :

Maggie C., fifty years, German, single, cigarette maker, admitted September 24, 1888; died October 8, 1888, 6 A.M. Cause of death: Pulmonary and intestinal tuberculosis, with amyloid degeneration of kidney, liver and spleen.

Her chief complaint when she entered was persistent diarrhoea from which she had suffered for about two months previous to her

entrance. This diarrhœa increased in severity and continued till death. Had no cough or expectoration, but has been emaciating very rapidly for two months; this was due largely, if not altogether, to persistent diarrhœa.

She also complained of incontinence of urine while lying down. This had existed ever since she was operated on by Dr. Skene, and it was found that water injected into the bladder flowed out into the vagina through a fistulous opening, which had resulted from the operation. This opening had closed before she was discharged from the Long Island College Hospital in 1877, but had broken open later on, and had persisted up to the time of her death.

Vaginal examination caused acute pain. Tense bands stretching across the vagina could be made out, and the outlet was not quite two fingers in width between the tuberosities.

*Autopsy.*—Body very emaciated, abdomen is bulged very much forward.

Lungs: A little fluid, about one drachm in right pleural cavity.

Right lung: Adherent slightly at apex. On section shows some few old tubercular nodules at apex; rest of lung not consolidated, but is œdematous.

Left lung: Very adherent by old adhesions at apex; also solidified by tubercular degenerations at entire apex.

Heart: Left ventricle; muscle much dilated. There was a piece of fibrinous tissue formed in distinct separable layers, which was fastened to and enlarged the chordæ-tendinæ of the mitral valve, making it somewhat stenosed. This was easily pulled off, and left the valve of normal size.

Liver: Seemed normal.

Spleen: Very hard on section and slightly enlarged. Iodine showed unusually well marked amyloid changes.

Kidney: Left, size normal; capsule somewhat thickened and adherent. The color was white, showing by pink tracings the lines of the blood-vessels. On section they were hard and white, the pyramids standing out very clearly against the thick cortex. The amyloid degeneration was far advanced. Right kidney contained one quite large pocket of pus; the whole pelvis was full of pus. In several places there were calcareous deposits between the pyramids.

Stomach: Was somewhat dilated.

Intestines: At the base of the vermiform appendix and for some distance down the colon there were occasionally groups of miliary tubercles. The interior of the intestines, especially around the cæcal valve, showed well marked and far advanced tubercular

ulcerations. There was also some amyloid degeneration of the intestinal mucous membrane.

Uterus: The ovaries were found to be normal, also the tubes. The uterus was acutely retroflexed, the fundus lying down in Douglas' cul-de-sac. The cervix was closely adherent to the right anterior wall of the pelvis.

Pelvis: The pelvis, which was removed and sent to Dr. Skene, was of the following dimensions: Between the spines, 10 inches; between the crests,  $10\frac{1}{2}$  inches; transverse,  $4\frac{1}{2}$  inches; oblique, 4 inches; outlet conjugate, 3 inches; transverse,  $2\frac{1}{2}$  inches. These measurements are with the soft parts in place. The promontory of the sacrum is pushed forward by the marked kyphotic curve of the lumbar vertebræ.

The pelvis was received just as it was removed from the body, and it was only after I had cleaned and mounted it that its pathological value was seen.

*Description of Pelvis.*—The pelvis is of the form known as the flattened rachitic.



FIG. 1.

All the bones composing it are smaller than normal, and more or less distorted. The ilia are flattened, and the distance between the anterior superior spinous processes ( $9\frac{1}{8}$  inches) is only  $\frac{1}{8}$  of an inch less than the distance between the crests of the ilia (10 inches). See Fig. 2.

This constitutes considerable deformity, bearing in mind that this difference is 1 inch normally.

The ilia in places are as thin as a sheet of paper, rendering the bones exceedingly difficult to clean.



The lower end of the sacrum is bent forward and upward. The coccyx is firmly attached to the sacrum, and is bent upward so that its axis corresponds to the axis of the inlet. The lower ends of the sacrum and the coccyx are in the pathological condition known as rarefying osteitis.

The measurements of the obstetrical canal, shown in Figs. 2 and 3, are all from bony points, the soft parts not being considered.

Fig. 2 shows the general distortion of the pelvis and the antero-posterior flattening.

The true conjugate measures but  $2\frac{3}{8}$  inches, without the usual compensating increase in the oblique and transverse measurements, they being respectively  $4\frac{3}{8}$  and 5 inches.

These measurements are encroached upon very much by numerous projecting points and masses of bone, which lessen very materially their value from an obstetrical standpoint.

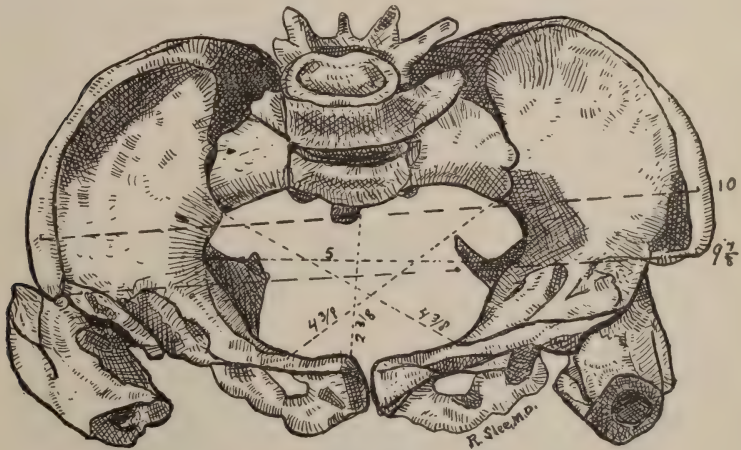


FIG. 2.

In Fig. 3 the diameters of the outlet are shown, the antero-posterior being reduced from 5 to  $3\frac{1}{2}$  inches, the transverse from  $4\frac{1}{2}$  to 3 inches; and the oblique, which in the normal pelvis is an unimportant one—owing to the elasticity of the sciatic ligaments—in this pelvis is fixed at  $3\frac{3}{8}$  and  $3\frac{3}{4}$  inches respectively, owing to the very prominent *ischial spines* which project downward, backward and inward to within 1 inch of the inner surface of the sacrum.

In addition to the general deformity of the pelvis and the alterations in the shape and measurements of the birth canal, another

most interesting condition, and one which played a most important rôle in Dr. Skene's operation, is the fixation of both hips.

This added greatly to the difficulty, as will be seen in the description of the operation itself.

On the right side (see *a*, Fig. 3) the ankylosis is fibrous, but owing to the absorption of the head of the femur and the almost total obliteration of the acetabulum, the movements of the joint are practically lost. On the left side, however (*b*, Fig. 3), the ankylosis is bony, with a complete obliteration of the hip-joint. The bones are molded together in so perfect a manner as to give the appearance at first glance of congenital origin, and it is only on close inspection that a portion of the outline of the joint can be made out.

Taking the axis of the sacrum as the base line, both thigh bones are fixed in an upward position, at an angle of about  $32^{\circ}$ , to the axis of the trunk.

The bony changes in the neighborhood of the acetabulum resulting from the long continued suppuration, unfortunately, cannot be shown in the cut, but they are very extensive in character, the bones retaining but little of their normal appearance, being fissured and filled with numerous pockets of varying depth and size, all the way from that of a pea up to a pullet egg.

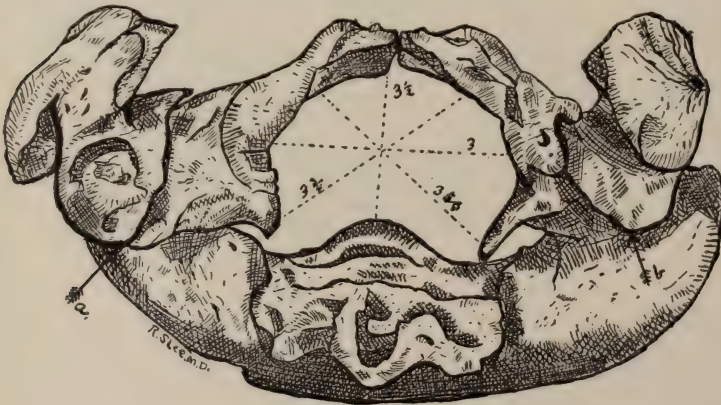


FIG. 3.

A glance at the pelvis shows how extensive and long continued must have been the suppuration at some time in the history of the case, and it readily accounts for the extensive amyloid changes which were found at the autopsy, and which helped to cause the death of the patient, and the evidence of old tubercular processes

found everywhere seem to point clearly to the origin of the trouble in the bones of the pelvis.

As the autopsy notes state, the pelvic organs on gross examination are apparently normal, except the marked retroflexion of the body of the uterus, and its firm adhesions to the anterior wall of the pelvis help to rigidly fix it in position, in addition to the large amount of cicatricial tissue which everywhere fills the cavity of the pelvis. This scar tissue resulted from the pelvic peritonitis which had existed sometime previous to the operation by Dr. Skene and at that time interfered with his work. The following is the history of the case published in 1877.

A SECOND SUCCESSFUL CASE OF GASTRO-ELYTROTOMY.

PERFORMED BY ALEX. J. C. SKENE, M. D.,

Professor of Gynæcology in the Long Island College Hospital, Brooklyn, N. Y.

*Reprinted from The American Journal of Obstetrics and Diseases of Women and Children, Vol. X., No. IV., October, 1877.*

The subject of this history is an unmarried Bohemian girl, 37 years of age. She became pregnant, but concealed her condition from her relatives, with whom she lived, up to the full period of gestation. This she was enabled to do by being herself very much deformed in body.

She was taken in labor on Tuesday, the 19th of June, 1877, and soon after the membranes ruptured; at least, this much was learned from subsequent inquiry. Her labor pains continued, but she did not disclose her true condition, nor did her friends suspect what was her trouble; but becoming alarmed at her continued suffering, they sent for Dr. S. Schmitzer on the morning of Friday, the 22d. The doctor found that she was pregnant at full term. The membranes were ruptured, the liquor amnii completely drained off, and the uterus contracted firmly round the child. The dilatation of the os uteri was only sufficient to admit the point of the finger.

The patient was much below the average size, emaciated, her complexion sallow, and her skin dry, and ill-conditioned in appearance. There was a well-marked forward curvature of the spine in the lumbar region; the sacrum was nearly straight, and formed a right angle with the axis of the spinal column (see Fig. 4); the symphysis pubis was deeper than normal, being about two inches. The antero-posterior diameter of the superior strait was said by Dr. Schmitzer to be one and one-fourth inches, and I am confident that it did not exceed one and one-half inches. The thighs were flexed

to nearly a right angle to the body, and held there by ankyloses of the hip-joints (see Fig. 5). The knees could not be separated more than an inch and a half. The left lower extremity was four and three-fourths inches shorter than the right. A number of deep scars about the hips indicated the previous existence of large abscesses. These, existing in connection with the ankylosis, led to the conclusion that she formerly had had hip-joint disease of both sides.



FIG. 4.

Dr. S., finding the conditions described, satisfied himself that normal delivery was impossible. He then called Drs. Frickenstein and Weber to see her in consultation. These gentlemen agreed with the doctor regarding the deformity and the difficulties in the way of delivery.

I saw the patient with Drs. Schmitzer and Alexander Hutchins at 6 P.M., on Friday, the 22d. She was then partially relieved from pain by a dose of morphine which was given to her in the afternoon. The os uteri was still undilated beyond about half an inch.

From the character of the presenting portion, as observed through the walls of the uterus, it was presumed to be the vertex.

In consultation we agreed to first dilate the cervix, and then deliver by gastro-elytrotomy; but as the patient was not having severe pains, and we were not then prepared to operate, we concluded to wait until morning, when we would have daylight. In the meantime dilatation of the os could be attended to. Early on the following morning, Saturday, Drs. S. and H. began an artificial dilatation of the os, which was found to be a most difficult task. Owing to the deformity of the patient, the cervix was flexed backward so as to bring its axis to a sharp angle with the axis of the uterus, and there was not room enough in the pelvic cavity to permit bringing the cervix forward on a line with the body of the uterus. It was therefore almost impossible to pass the dilator through the internal os. After prolonged manipulation, dilatation to the extent of two and one-half inches was effected.

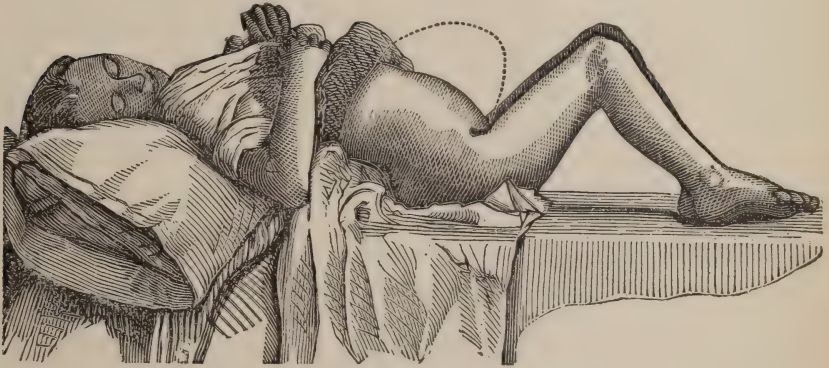


FIG. 5.

At 10 A.M., on Saturday, the 23d, four days from the time labor began, we were prepared to operate. In selecting this method of operating we were guided by the fact that craniotomy was impossible under the circumstances, not alone because of the narrow superior strait, but also from the fact that the axes of the uterus and vagina were at right angles, which made it impossible to use the necessary instruments for delivery in that way. This statement will be indorsed by Drs. Schmitzer and Hutchins, who tried to dilate the cervix. Cæsarian section was suggested by the difficulties in the way of gastro-elytrotomy; but we preferred to encounter the obstacles rather than open into the peritoneal cavity and uterus of the patient. The condition of the patient just before

the operation was not encouraging. Her skin was dry and hot, tongue coated, temperature  $102\frac{1}{2}$ , pulse 98. Indeed, the operation was beset with difficulties from beginning to end, and on that account I will give the several steps in brief detail.

To reach the point for incision parallel to and a little above Poupart's ligament, it was necessary to raise up the abdomen and retract the soft parts of the thigh as much as possible. This can be understood by referring to Fig. 5, in which the dotted line shows the relation of the abdomen and thigh before delivery. The parts being thus brought into view, the abdominal walls were divided through the tegumentary and muscular layers. This was accomplished without much trouble; but on reaching the region of the peritonæum, I encountered the products of a previous inflammation, which obscured all the normal anatomy. I have always believed that a previous pelvic peritonitis would greatly complicate this operation, and have dreaded that such a case might fall to my lot, and in this case I fully realized my expectations. The peritonæum, iliac fascia, bladder and vagina were all glued together by plastic material, which rendered the normal tissues unrecognizable. This, and the space between the flexed thigh and the large abdomen being very narrow, made the difficulty of manipulating very great. The vagina also was narrow and unyielding, so that it could not be forced upward to guide us in the right direction. In this part of the operation there were three points of danger to be guarded against:

*First.*—Wounding the peritonæum. There is no danger of doing this when the parts are normal, for then the peritonæum can be easily recognized and lifted up from the other tissues with perfect facility; but in this case everything was changed in appearance and character, and in place of easy-sliding tissues we had lymph and adhesions, both difficult to manage.

*Second.*—I had learned, by former experience, that to open the vagina too near the symphysis pubis gives rise to the danger of the incision extending into the bladder during delivery.

*Third.*—If the incision is made too near to the walls of the abdomen, there is danger of wounding the circumflexa ili artery.

We succeeded in avoiding the peritonæum and important vessels, but unfortunately the bladder, which was drawn upward and to the right by old adhesions, was wounded. That is not very surprising when it is remembered that in making this portion of the dissection I was guided mostly by the sense of touch, and the parts were so crowded together and changed in appearance as to be almost unmanageable. The point at which the bladder was

wounded was just opposite the anterior superior spinous process of the ilium, a place where one would not expect to find it.

When the cervix uteri was reached through the opening in the abdominal wall and vagina, we found dilatation sufficient to admit the points of the four fingers. Manual dilatation was then made and soon completed. The only difficulty experienced was in getting the fingers between the child's head and the uterus, so firmly was the latter contracted. The head presented transversely with the occiput to the left side. Delivery by version has been advised in this operation, and was thought of in this case, but was ruled out as being impossible, owing to the firm contraction of the uterus. Deciding to deliver with the forceps, we proceeded to use them. Here we encountered another perplexing difficulty. The thigh stood up in front of the opening in the abdominal wall and the os uteri, and prevented the introduction of the instruments. After some awkward manipulating, we succeeded in grasping the head, and then delivery was easy and speedy. The placenta came away without trouble. There was very little hæmorrhage; the wound was closed with silver sutures and dressed with cotton wadding, secured by adhesive straps.

The child was markedly asphyxiated, due, no doubt, to the continued contraction of the uterus so long after the escape of the liquor amnii. It was restored after the vigorous employment of artificial respiration. It was well developed, healthy in appearance, and weighed  $7\frac{1}{2}$  pounds. Drs. S. Schmitzer, Hutchins, Corey, Cushing and Hunt were present and gave their counsel and assistance in the operation.

She recovered from the anæsthetic promptly, and showed no symptoms of shock, nor did she complain of pain or discomfort. On the day following the operation her pulse was 94, and her temperature had fallen from  $102\frac{1}{2}^{\circ}$  (which it was at the time she was delivered) to  $100^{\circ}$ . The catheter was used frequently in order to keep the bladder from being fully distended.

Drs. S. and H. observed that, after a few days, the quantity of urine retained in the bladder became less and less, and at the same time the urine was seen to escape from the vagina.

The introitus vaginæ was small and firmly contracted, which prevented free drainage, causing the urine to accumulate in the vagina and well up through the abdominal wound.

A rubber tube, perforated with small holes for about two inches at one end, was introduced into the vagina for the purpose of draining off the urine. It answered well, and for twenty-four hours the urine flowed continuously and freely into a urinal, and

all appeared to progress well for a time. The patient unfortunately was ignorant, obstinate and unmanageable. Her mental obliquities and angularities were, like those of her body, well marked. After a day or two she became dissatisfied with the drainage tube and would not let it remain any longer in the vagina. Every time that the doctor placed it there she would withdraw it and throw it away, and no argument could persuade her to do otherwise. The urine, from this time, flowed freely from the abdominal wound, and occasionally from the vagina. Owing to the disagreeable disposition of the patient, it was impossible to keep her clean or comfortable. Her appetite was good, her bowels moved regularly, she slept well on small doses of morphine at bedtime, and her pulse and temperature were normal, but it was difficult to keep her wounds in good condition. She was cared for by her sister, who, although willing, was not skilled as a nurse, and, besides, she had her household duties to perform.

Such being her surroundings, we concluded to send her to the hospital, and on the 5th of July, two weeks after delivery, she was taken there. She made the journey to the hospital, about three miles, very comfortably. When admitted, her condition gave evidence of want of proper nursing. The wound was healed except at the outer portion near the anterior superior spinous process of the ilium, where the fistulous opening was. Around the opening the parts were foul and covered with a superficial slough. Most of the urine escaped from this opening. There was also a free purulent discharge.

She was placed upon tonic doses of quinine, and a little morphine at bedtime to relieve an uneasy restlessness. The wound, vagina and bladder were kept thoroughly clean by the frequent use of carbolic acid and water. A stream was passed from the wound in the side through the vagina and then reversed. The bladder was also injected; the stream being carried in through the urethra and made to escape through the vagina and abdominal opening.

To keep the wound in the best condition for healing, a rubber tube was introduced into the fistulous opening in the side, and it made good drainage when the patient could be persuaded to keep it in place, but she often pulled it out. After a few days the house physician succeeded in passing a perforated rubber tube from the abdominal opening out through the vagina and left it there. This made perfect drainage. Sometimes the urine would flow from one end of the tube, and sometimes from the other, according to the



position taken by the patient, and she was unable to remove this tube, which was a great advantage.

From this time the abdominal wound healed rapidly, and the drainage tube was finally removed about the 3d of August. The urine flowed then from the vagina only. To drain the vagina, a hard rubber bulb with a stem was used, which answered very well to carry off the water. The bulb was olive-shaped, and perforated closely with small holes. To the stem of the bulb a small flexible tube was attached which conveyed the urine to a vessel. A rubber urinal was obtained for her which she could wear while walking around, but for some reason, which no one could understand, she would not use it.

Most of the time since the operation the bladder has retained more or less urine, and at this stage of her progress the house physician noticed that it began to retain more and more, showing that the fistulous opening was closing. Improvement in this direction continued until the 12th of August, when the bladder had fully regained its power of retention, indicating that the fistula had closed.

At this date (August 12th) her health is as good as it ever was. In short, the recovery of the mother is complete, and the baby, which was left at home, prospered for a time, but died when eighteen days old, from bad feeding and care.

The notes here given of the case while in hospital are brief extracts taken from the clinical records kept by the resident physician, Dr. McPharlin, to whose skill and constant care her complete recovery is largely due.

In reviewing this case of gastro-elytrotomy (the second successful case on record, so far as I know), I may say that a more unfavorable case for operating could not well be imagined.

The conditions of the patient in every particular relating to the operation, and the want of facilities for after-treatment, were such as to thoroughly test the merits of this method of delivery. Certainly, greater difficulties than were here encountered are not likely to occur in the future history of this operation.

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JAMES WATT, M.D.

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Dr. James Watt, of Brooklyn, died on September 11, in his forty-eighth year. A sketch of his life will appear in a future issue of the JOURNAL.

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## EDITORIAL.

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### DIURETIN.

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Diuretin is the name given to sodio-theobromine-salicylate, a new diuretic recommended for the removal of dropsy. In the *N. Y. Medical Journal* of July 11th, Dr. R. H. Babcock, of Chicago, reports four cases in which he employed the remedy with good results. The following are his conclusions:

1. Diuretin (Knoll) is a diuretic of great power and promptitude, suitable to all forms of dropsy.
2. Not increasing arterial tension, it is likely to succeed where digitalis, caffeine, and their congeners fail.
3. In cases of cardiac dropsy, with great feebleness of the pulse and arrhythmia, it will strengthen and regulate, rather than depress, the heart's action.
4. It appears to cause no irritation of the stomach or kidneys.
5. It requires to be given to the extent of from ninety to one hundred and twenty grains daily, and preferably in small doses frequently repeated.
6. It is best administered either in solution in warm water or in gelatin-coated pills, since, if exposed to the air in powders, it undergoes change, with a precipitation of much of the insoluble theobromine.

MOSQUITO BITES.

To alleviate the unpleasant sensation caused by the bite of the mosquito, various remedies have been suggested. Among them are oil of cloves, ammonia, bicarbonate of soda, chloroform, thymol and ordinary soap. We have in our own experience obtained more relief from solution of cocaine, four per cent., than from anything else.

STATE MEDICAL EXAMINERS.

These Boards are now complete, having been appointed by the Regents of the University pursuant to chapter 507, Laws of 1890. These Boards will in the future act also as the Regents' Medical Examiners, as provided in chapter 529, Laws of 1889, title 3, §§ 6, 7 and 8. These Boards are composed as follows :

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H. B. Smith . . . . .	1 year . . . . .	131 Fort Greene Place, Brooklyn.

DETECTION OF SEX IN UTERO.

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A recent writer calls attention to what he has observed in a considerable number of cases of pregnancy. He states that whenever the foetal movements have been felt by the mother more prominently on the right side than on the left, the child proved to be of the female sex; while pronounced foetal movements on the left side preceded the birth of a male. We have always had difficulty in memorizing such rules as this, being often in the position of the old woman who could invariably tell an addled from a good egg by putting the suspected one in water. If it sank, it was either good or bad, but she could never remember which. It may perhaps be of help to those who wish to make a practical use of the observation of the unknown writer who has called attention to the foetal movements, to bear in mind that the gentler sex is always "right," and that it is only those of masculine gender who are ever "left."

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BIOGRAPHICAL SKETCH.

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THOMAS LUDINGTON SMITH, M.D., U. S. N.

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Dr. Thomas L. Smith, a retired surgeon of the United States navy with the rank of commodore, died at his home, 167 Joralemon Street, August 14, 1891, at the age of ninety-one years. His service in the navy covered a period of fifty years. He was born in Orange, N. J., in 1800, and was educated in the Orange Academy. At the age of seventeen years he began the study of medicine in the office of Dr. Samuel Hayes, of Newark. Three years later he came to New York, where he continued his studies under the direction of Dr. J. Kearney Rogers, one of the founders of the New York Eye and Ear Infirmary. He was an assistant in this institution until 1823. The College of Physicians and Surgeons gave him his degree in 1822. He practiced for a short time in Greenwich Street, New York. President John Quincy Adams gave him the commission of surgeon's mate on March 28, 1828, and he began his naval career on the frigate Hudson in 1830 by going to Brazil. He received the commission of surgeon from President Andrew Jackson in 1837, and from 1847 to 1849 he was surgeon of the New York Navy Yard. He went to China on the Saratoga in

1850, and was fleet surgeon during Commodore Perry's Japan expedition. From 1854 to 1858 he was again surgeon in the navy yard, and in 1859 he was detailed as fleet surgeon of the African squadron, under Commodore Inman. After two years spent with the squadron in the Mediterranean he returned to New York and took charge of the naval hospital, where he remained until 1865. He was surgeon of the navy yard for the third time in 1869 and 1870. He was retired in 1871 with the commission of medical director, with the relative rank of commodore. Since that time he has lived in retirement in this city. He married Frances Bowen Lathrop in 1833. She died in 1842. His second wife, who survives him, was Harriet Bacon, whom he married in 1846. The couple had one daughter, who died in 1877.

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PROCEEDINGS OF SOCIETIES.

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HARLEM MEDICAL ASSOCIATION.

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*Stated Meeting of the Harlem Medical Association, March 4, 1891.*

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DOUBLE COMPOUND FRACTURE OF THE TIBIA.

Dr. THOS. H. MANLEY presented a patient, male, 20 years old, who, in May, 1890, was run over by a street car and sustained a double compound fracture of the left tibia with much laceration of the soft parts. The central segment of the tibia, about four inches long, hung through the integument. He was brought to the hospital and suffered considerably from shock, having lost much blood. A homœoplastic operation was attempted by replacing the bone and wiring it in place. Although antiseptic precautions were taken, suppuration ensued, and the bone disintegrated and only a shell remained; but on this as a nucleus new bone has formed, and up to this time has nearly filled up the whole substance of the bone. There is some motion in the lower portion of the fractured segment, but this will probably disappear when the new bone has fully developed.

Dr. MANLEY said that he wished to call particular attention to the fact that, although this was a homœoplastic operation performed on a young healthy man with a vascular supply intact, through the lateral attachment of the tibialis anticus and connective tissues, yet only the superficial cortical layer of the compact tissue escaped disintegration and absorption.

## SPECIMEN AND DISCUSSION.

Dr. C. B. WHITE, in presenting a specimen of carcinoma uteri, said: I removed this from a woman of 53 years, some twelve days ago. The method adopted was vaginal hysterectomy. Before removing the uterus I used the sharp-spoon and removed as much of the broken down carcinomatous mass as possible. As you see, the posterior lip is the principal seat of the disease, but the adjacent wall of the vagina was also involved, and this also was removed. Once the temperature reached  $102^{\circ}$ , but the patient has since done very well.

Dr. M. McLEAN.—Without criticising the merits of the operation of vaginal hysterectomy in Dr. White's case, I am firmly convinced that this method is carried too far and is being done too recklessly at the present day. The return of the disease is often very prompt and promptly fatal. It is a question if the operation prolongs life in patients who are advanced in years. I do not think it does, and I speak from practical experience.

In our meeting of November last I reported an operation for the removal of a *fœtus* at the end of the twelfth month of pregnancy, the child occupying an unruptured Fallopian tube. At that time there was some doubt in the minds of the members as to the positiveness of the diagnosis, although the history of the operation fully confirmed my statements. Recently I confined the woman in a normal labor. After the birth of the child it was plainly demonstrated to several physicians present that the recti muscles were considerably separated, and the uterus could be easily mapped out. On one side was the large and thickened tube which at the previous pregnancy held the *fœtus*. It had undergone involution to a considerable extent, but still remained much larger than normal.

## PRESENTATION OF NEW INSTRUMENTS.

Dr. MALCOLM McLEAN.—Permit me to exhibit a catheter which I have devised with a view of being safe and antiseptic in the hands of physicians and nurses. It is glass, two and a half inches long, and slightly curved. It is too short to produce any injury to the walls of the bladder. A small rubber tube is attached to the end, merely for convenience, to conduct the urine to the vessel. I have employed this instrument to empty the bladder of some fifty women, and find its length amply sufficient. The severest test to which it was placed was in a primipara, where the head was well engaged in the superior strait and the parts were very badly swollen. The instrument entered only some one and two-

third inches, and successfully accomplished its work. The teaching of the profession to employ catheters of four inches or more I believe to be wrong, because unnecessary length of instruments leads to frequent injury of the bladder and to the introduction of sepsis at times. As you see, the instrument can be filled with an antiseptic fluid; as, for instance, boracic acid, and the free end of the rubber tube drawn over the end of the tube which is introduced into the bladder. It can then be carried in the vest pocket, and is ready for use at any moment.

Dr. VAN SANTVOORD.—A patient of mine developed cystitis as a result of an unauthorized catheterization by a nurse. There was pus but no bacteria in the urine. I washed out the bladder, but there was a certain amount of residual urine. The bladder seemed to sag on each side of the uterus and form pockets. Placing the woman on her side, I employed a rubber catheter and tube, and washed out the bladder. Subsequently electricity has been made use of to correct the atony of the vesical walls. I am in doubt if the catheter proposed by Dr. McLean would have been useful in a case like this.

Dr. McLEAN.—I consider the bladder defined by Dr. Van Santvoord to be a diseased one, and of course requires special consideration. The catheter which I have exhibited was devised for use in normal bladders, and in such will accomplish all that is claimed for it.

A. H. LEARY,  
*Secretary.*

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## PROGRESS IN MEDICINE.

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### SURGERY.

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BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

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#### COMPARATIVE VALUE OF PERINEAL AND SUPRAPUBIC LITHOTOMY.

W. T. Lindenbaum (Section upon Surgery, Fourth Congress of Russian Physicians, Moscow, January, 1891; *Centralblatt f. Chir.*, No. 2, 1891). L. records seventy lithotomies performed during the past nine years upon children under fifteen years of age. As a result of his experience, agreeing as it does with those of Smitzen, Koracz and König, he believes that for stones whose diameter does

not exceed 2 cm. the perineal method offers the greatest advantages, being comparatively easy of performance and free from danger. But two of the seventy cases ended fatally. Thirty-two cases in adults are likewise reported, of which eight (twenty-five per cent.) died. This excessive mortality is to be attributed to different complications of internal organs, advanced age, etc. During the last year L. has operated ten times by the suprapubic method, the age of the patient varying from eight to fifty-one years. Of these but a single patient was lost (the oldest). The post-mortem examination revealed numerous tubercular foci in the lungs and advanced cardiac degeneration. L. conducts the operation with stringent antiseptic precautions. Simple tube drainage, with abdominal decubitus, for from seven to ten days, constitute the after-treatment; no bladder sutures are employed. Should the urine possess a highly putrid quality, the membranous urethra is opened for purposes of drainage and irrigation. The high operation is indicated in stones whose diameter exceeds 2.5 cm.

#### APPENDICITIS.

Reclus (*Revue de Chir.*, 1890, No. 10). The author's views as to the necessity for early operative interference in perforative appendicitis are positive and unqualified. He asserts that the diagnosis once having been made, surgical interference cannot be brought too early into the case. This is particularly true if the course of the case has been such as to justify the belief that no limiting adhesions have occurred to shut off the peritoneal cavity from the point of perforation. The double object of cure of the original disease, and in addition the prevention of general peritonitis, make more than desirable, in fact, imperatively necessary, immediate abdominal section. Should the inflammatory process be strictly localized in the right iliac fossa, such great urgency need not necessarily be present; but it should be borne in mind that the suppuration process in these cases extends with extraordinary rapidity, and the prognosis be thereby rendered very unfavorable. At about the fourth day following the attack of perforative appendicitis, solid adhesions are to be expected between the abscess cavity and the abdominal wall.

R. employs the oblique incision over the iliac fossa, this possessing the advantage, according to the author, of giving ready access to the point of suppuration. In cases in which the suppuration proves to be more extensive, this may be extended toward the umbilicus or lumbar region, according to the indications.



Median laparotomy should be reserved for cases of general peritonitis, as a secondary operation after the oblique incision.

[The difficulties in establishing the fact as to whether limiting adhesions have or have not occurred in this class of cases will always be a source of anxiety to the surgeon. It is, therefore, quite essential that interference, to be successful in the greatest number of cases, should be instituted early in the case. In such an event the vertical right lateral incision (lateral laparotomy) should be employed, for the reason that it gives ready access to the appendix itself, which under these circumstances can and should be removed. In cases in which the suppuration process is already under way, this incision may be extended in any direction, as the exigencies of the case demand.—G. R. F.]

UPON PERFORATION OF THE VERMIFORM APPENDIX AND OF THE CÆCUM.

H. Einhorn (Münchener med. Wochenschrift, No. 7 and 8, 1891). E., out of 18,000 autopsy records at the Munich Pathological Institute, found 100 cases of peritonitis following perforation of vermiform appendix and cæcum. Those resulting from tubercular, typhoid and dysenteric ulceration were excluded. The results of his studies are summed up as follows:

(1) Ninety-one per cent. of all cases of periappendicitis are consequent upon diseases of the appendix itself.

(2) Primary perforations of the cæcum are found in only nine per cent.; in these cases narrowing of the lumen of the bowel also existed.

(3) Appendicitis and periappendicitis occur with equal frequency in both sexes.

(4) A predisposition for the disease was found to exist in adult and middle life rather than, as heretofore supposed, in childhood.

(5) Perforation of the appendix is only rarely found to result from the presence of a foreign body, but rather in the majority of cases from masses of hardened fæcal matter.

(6) The formation of the latter is favored by changes in the location and shape of the appendix, and diseases of its mucous and muscular coat. The latter in its turn is frequently caused by some irritating qualities of the intestinal contents.

(7) Appendicitis and periappendicitis are not infrequently the result of traumatism.

Secondary perforations (that is to say, emptying of the abscess resulting from the appendicitis or extension of the perforation) occurred in 20 cases, as follows: 13 times into the lumen of the bowel, 5 times into the cæcum, 3 times into the ascending colon,

3 times into the small intestine, and 2 times into the rectum. Perforation in an outward direction through the abdominal walls occurred 3 times; in 2 cases one or the other of the pleural cavities were invaded; in 1 case simultaneous perforation of the bowel lumen and of the posterior abdominal wall occurred. In a single case a retroperitoneal abscess extended from Poupart's ligament to the right kidney and to the diaphragm. Evidences of pleuritis were found in 8 cases; infectious emboli were found 6 times in the portal vein in connection with perityphlitis and secondary abscess of the liver.

UPON THE EMPLOYMENT OF ETHYL BROMIDE AS AN ANÆSTHETIC.

Th. Kölhker (*Centralblatt f. Chirurgie*, No. 20, 1891). The author advocates the employment of this agent in all operations of a minor character or of short duration. The following method of its employment is given: Preparation is made as for chloroform narcosis. The patient is placed in the recumbent position, perfect silence is enjoined, and the patient accustomed to the odor of the agent by placing but a few drops upon the mask at first. After a few seconds the mask is thoroughly saturated and covered so as to be almost air-tight. The anæsthesia is completed in about one minute, and is announced by the dropping of the patient's arm when raised. The narcosis lasts from one to three minutes. The dose usually employed for children is from five to ten grammes; for adults, ten to fifteen grammes. It is important that the mask employed is such as will permit of being entirely enveloped. The patient awakens from the anæsthesia in as good a condition as before the administration. After-symptoms are entirely absent.

UPON THE REMOVAL OF CICATRICAL BANDS AND ADHESIONS ARISING FROM INFLAMMATORY PROCESSES IN THE GALL-BLADDER AND THE FEMALE GENITAL ORGANS.

Riedel (*Korrespondenzblätter des allgem. Vereins von Thüringen*, 1891; *Centralblatt f. Chirurgie*, No. 21, 1891, p. 419). The author's studies are directed toward throwing some light upon diseased conditions arising from the presence of old adhesions, bands, etc., resulting from inflammatory processes within the abdominal and pelvic cavities. Reference is had particularly to those attacks of pain and other disturbances of the digestive apparatus, which are temporarily relieved by means of opium or active purgation, and which during the first few attacks rarely lead to the necessity for operative interference. Should complete obstruction occur, the medical attendant is deceived into procrastination until operative

procedure is out of the question altogether or becomes an almost hopeless *dernier ressort*. During examination per vaginam, R. has occasionally found a peculiar constricted or pinched-up condition of the tissues, which, if demonstrated to exist at the same situation upon separated examinations, suggests the adhesion of portions of the intestinal canal. During 36 laparotomies for diseases of the gall-bladder, upon nine occasions R. found adhesions existing between this organ and the omentum, four times with the intestine, twice with the abdominal wall. These seemed to be not necessarily connected with inflammatory processes of great severity, nor with suppurative processes, but to have occurred with simple catarrh of the organ without even the existence of biliary calculus. In 68 abdominal sections for gynæcological purposes (oöphoritis, pyosalpinx, etc.), adhesions were found seventeen times; twice with omentum, twice with intestine and omentum, eight times with small intestine alone, once with the latter and the appendix vermiformis, and four times with the sigmoid flexure.

It is a striking fact that in 136 cadavera of women who had borne children, examined by Bandl, traces of old inflammatory states (adhesions, bands, etc.) were found in 76.

R. shows, by a large number of exceedingly interesting histories, how beneficially and out of all proportion to the apparent anatomical disturbance a simple laparotomy may influence and improve pre-existing conditions. He advises boldness in attacking by section obscure intra-pelvic and intra-abdominal diseases, and backs up this advice by his own example.

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## OBSTETRICS.

BY CHARLES JEWETT, M. D.,

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### PORRO OPERATION—A NEW METHOD OF TREATING THE STUMP.

Maunsell (Br. Gyn. Jour., May, 1891). The incision should be long enough to permit of the gravid uterus being taken out of the cavity of the abdomen.

While an assistant takes charge of the uterus, place a large flat sponge, wrung out of hot water, over the bowels, to keep them warm and out of sight; and rapidly suture up the wound with

strong salmon silkworm gut, as far as the neck of the uterus which is pressed toward the pubic end of the wound by an assistant.

Open uterus by longitudinal incision of upper third, and remove child, leaving placenta behind.

Apply the rubber tourniquet below the uterus.

Pack round with sponges. Make transverse incision through peritonæum, covering the top of the uterus, and rapidly reflect it to within half an inch of the rubber tourniquet. If the peritonæum is found to be very adherent to the fundus, make a circular incision all round the upper third of the uterus, and reflect it as above described.

Apply Koeberle's pin and wire *écraseur* to the neck of the deperitonized uterus.

Amputate the uterus with a large circular amputating knife, leaving a fair stump behind the pin.

Apply torsion and ligature to all bleeding points, as the assistant slowly and cautiously removes the rubber tourniquet.

Secure the lower end of the laparotomy wound, immediately above the stump, with a strong acupuncture needle.

Place a thin layer of iodoform wool under the reflected peritonæum, which is spread out like a saucer round the stump. Secure the edges of the reflected peritonæum loosely to the skin by five or six horsehair sutures. Dust the peritoneal reflection above and below night and morning with large quantities of iodoform and amorphous boracic acid (1 to 9) so as to keep it thoroughly dry. If treated in this manner, in a few days this saucer-like reflection of the peritonæum becomes dry, hard, tough, and aseptic and drops off.

Screw up the wire clamp daily. Dress the stump night and morning with a thick layer of iodoform and absorbent wool.

The advantages of this method may be summed up as follows :

- (a) The bladder and ureters cannot be injured by the *écraseur*.
- (b) There is no tension of the peritonæum or broad ligaments.
- (c) The stump cannot retract into the cavity of the peritonæum.
- (d) The stump is effectually shut off from the cavity of the peritonæum; and as it shrinks and sloughs away it is impossible for the matter to drain into the abdominal wound, or into the cavity of the peritonæum.

#### ADHESIVE PLACENTA.

Poll (*Centralbl. f. Gyn.*, No. 25, 1891) does not believe with Credé that the placenta can always be detached by external manipulation nor on the other hand does he believe with Ahlfeld

that retention is necessarily induced by it. His practice is to wait a half hour and then deliver if necessary by expression. The placenta by this time lies in the lower uterine segment and it comes away with the aid of very light pressure on the fundus. Credé's method applied after thirty minutes is entirely without danger but it is usually unnecessary and injurious to resort to it sooner.

GROWTH OF THE PLACENTA AFTER THE DEATH OF THE FŒTUS IN  
TUBAL PREGNANCY.

At a recent meeting of the British Gynæcological Society (Br. Med. Jour., June 13, 1891) Mr. Tait presented a specimen of ruptured tubal pregnancy bearing upon this question.

The patient had had recurrent hæmorrhages into the peritonæum but made a good recovery after removal of the gestation sac by laparotomy. The fœtus was not more than eight weeks old and long since dead. The large size of the placenta, as he thought, left no doubt that the placenta had gone on growing after the death of the fœtus.

[The claim that the placenta may continue to grow after the death of the fœtus has been especially urged by Mr. Tait as an argument for laparotomy and extirpation of the fruit sac in tubal pregnancy. Electricity for the purpose of destroying the fœtus *in situ* he contends is unsafe since the danger of rupture still remains from continued growth of the placenta.]

That the placenta may sometimes continue to grow *in utero* after the death of the fœtus has been proven in the experience of many practitioners. The reviewer is not aware of any observations that go to prove that the same thing occurs after the destruction of the fœtus by electricity. It is reasonable to assume that the electrical force which kills the embryo also arrests the development of the rudimentary placenta. At all events in no case thus far recorded has rupture occurred after the arrest of the misplaced pregnancy by the galvanic or faradic current.

RUPTURE OF UTERUS—RECOVERY.

Carl (Centralbl. f. Gyn., No. 26, 1891) reports a case of recovery after uterine rupture without laparotomy. The patient was a sexipara. The previous labors had all been protracted but were terminated without interference. The pelvis was narrow and the head, in the last pregnancy, unusually large. The labor pains which had been very severe, suddenly ceased, the patient going into collapse. As the extrusion of the fœtus was not complete the

woman was placed under chloroform and the child extracted by the feet. Some difficulty was encountered in extracting the head but was finally overcome by the aid of external pressure.

The after-treatment consisted in the use of a drainage tube passed through the rent without irrigation, and the administration of ergot. Despite some peritonitis complete recovery followed.

#### ETIOLOGY OF STILLBIRTH.

Dr. H. R. Spence (*Br. Med. Jour.*, June 13, 1891) recently read a paper on this subject before the Obstetrical Society of London. The paper was based on an analysis of the post-mortem findings in 130 cases. Hæmorrhages were usually found, and in various important viscera. These hæmorrhages occurred in cases delivered naturally or by forceps or version: in primiparæ and in multiparæ with large and with small children: in easy and in difficult labors. The hæmorrhages however were most frequently found in children subjected to much pressure during birth either from the birth canal or instruments. Cerebral hæmorrhage was especially frequent in case of stillbirth after delivery by forceps.

Hæmorrhage into other viscera was more frequently met with in breech than in vertex presentations.

The author observes that these accidents are most likely to be avoided by preventing premature rupture of the membranes, by artificial dilatation of the parturient canal (when necessary), by restricting the employment of version and other artificial manipulations to urgent cases, and preferring cephalic to podalic version in cases suitable for the former. The use of the forceps should be absolutely limited to cases in which there existed some pressing danger to mother or child, and it should never be employed merely to shorten the time of labor.



### PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

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#### ALCOHOLIC PHTHISIS.

Hector McKensie (Clinical Lecture, Brompton Hospital, London, June 17, 1891. Personal Report) gave his experience in relation to phthisis in alcoholic subjects, as found upon the examination of cases, their course, and observations made on post-mortem

examinations. It was remarked by the lecturer that the subject was one of great importance, and very little had been written upon it, some authorities denying altogether any relation between alcoholism and phthisis, but there was conclusive proof that alcohol did very markedly modify and control the disease.

In a series of seventy-five post-mortem examinations on alcoholics, tubercular lesions had been found in each case. Of this number sixty-seven had the lungs principally affected. In the remaining cases the lesions were found in the peritonæum and pleura. Hepatic cirrhosis was found in forty-five cases. Miliary tubercles, cheesy degeneration, consolidations, and excavations were found. The cases where an excess of connective-tissue formation existed were very few.

The vomicæ were generally small and their presence frequently was not found during life.

In only ten of the seventy-five cases was there any family history, making a marked distinction from non-alcoholic forms of the disease.

The diagnosis in many cases, especially early in the disease, could be made only by examination of the sputum, as the phthisical symptoms might be masked by the hepatic and nervous. Repeated examinations of the lungs were necessary. When tubercular formations once commenced, the progress was very rapid and a fatal termination almost inevitable. The patients were sometimes fat and pasty, and again emaciation was present. The circulation was always bad. The lecturer here stated that he believed in all cases of consumption the best guide in prognosis was the pulse. Troublesome cough is usually present.

The treatment is unsatisfactory. It is best not to use alcohol in any form, as the habits of the patients would probably cause the amount prescribed for medicinal purposes to be exceeded, with the most harmful results.

In all cases of marked alcoholism, even when the liver or the nervous system seem to be the part affected, examination should be made of the lungs. If there is ever expectoration, the sputum should be examined.

#### THE USE OF ANÆSTHETICS.

In the last volume of St. Bartholomew's (London) Hospital Reports there is given a numerical table relating to the use of anæsthetics in all operations for one year. During this period 3,606 operations were performed.

Chloroform was used in 1,601 cases.

Ether " " " 810 "

Gas " " " 686 "

Gas and ether were used in 509 "

There were two deaths during this period. Both occurred during the *administration of chloroform*. In both cases the heart was affected.

#### PEROXIDE OF HYDROGEN.

B. W. Richardson, of London, has lately published the results of a long series of experiments with the above remedy. Peroxide of hydrogen he regards as water which contains a certain number of atmospheres of ozonized oxygen, being a compound, not a mixture. The law which governs its action is that, to produce its physiological action, it must act on tissues that are vital and are therefore capable of displacing the oxygen. When contact occurs with blood corpuscles, these latter take up the oxygen. Experiments were made upon mucous membranes in various parts of the body. Upon normal tissue it had no effect, although from certain cavities (membrane), as the bladder, it might be absorbed into the general circulation, and if in too great amount would destroy life. Injection into the cellular tissue caused a temporary emphysema. Upon injection into the lung substance itself the oxygen was absorbed and sustained life for some five minutes.

Muscular relaxation is produced by peroxide of hydrogen. It has also a strong action on all purulent matter, the oxygen being liberated, this result being influenced by heat. This action, therapeutically, is most important. The author suggests that pus, when present in the body, must produce a change in ordinary blood deoxidation, leading to a general depression. Experiments also showed that when decomposition was present the action of the peroxide was greater.

In medicine peroxide of hydrogen has been used with good results in *diabetes*. In this disease the following prescription was used:

R	Codeiæ,	-	-	-	-	gr. iii.
	Spts. vini rect. (830),	-	-	-	-	ʒ ii.
	Sol. perox. hydr. (10%),	-	-	-	-	ʒ ii.
	Aqua, q. s. ad.,	-	-	-	-	ʒ xii.
M.	ʒ ss. t. i. d.					

In *pulmonary tuberculosis* by adding oxygen to the blood it aids respiration. Four ounces of a ten-per-cent. solution have



been given. This is a large dose. In *pertussis* it was used in the form of ozonic ether, made by adding two parts of anhydrous ether to one of the peroxide. Of this mixture ten to sixty minims may be given four times a day, well diluted. It may also be used as a spray. In *asthma* and *angina pectoris* causing muscular relaxation it is useful. Good results are obtained in all local ulcerations.

No mention is made in the notes recorded at this writing of the use of peroxide of hydrogen in diphtheria. It may, however, be used in a sixty-per-cent. solution as gargle or spray, acting as a powerful antiseptic and dissolving the membrane.

#### THE SLOW HEART.

Taylor (Lond. Lancet, June 6, 1891) defines brachycardia as a condition where the beats of the heart do not exceed forty or fifty per minute. A relation is traced between large bodies, having in many instances slowness or deliberation of motion, and the slow heart. It is mentioned that the elephant and the horse have respectively only twenty-eight and forty beats per minute. The author has found brachycardia to be present in tall men, recording six cases, where there was great muscular development, each man being over six feet in height. It is more common in males than females, in early than advanced life. It has been found to bear some relation to the condition of the stomach, being occasionally present after eating, and in persons who are dyspeptic.

In brachycardia two factors are present: prolongation of diastole, and a longer interval between the first and second sounds.

In strictly diseased states brachycardia is found to be present where there is degeneration of the heart wall, pure and simple, or degeneration attendant upon valvular disease; in diseased coronary arteries, causing an imperfect blood supply; in blood diseases; after fever, when the period of excitement has passed; as a neurosis, depending upon pneumogastric inhibition, direct, or from some central or spinal change; in abdominal lesions; as a result of certain drugs, as tobacco, cocaine, aconite, nitrate of potash.

In this paper may also be found Graves' rule which, practically, is that, when a change from the standing to the sitting or reclining postures produces no change in the pulse rate *hypertrophy and dilatation* are usually present.

The conditions mentioned above are a beautiful illustration of the fact that the nervous control of the heart is associated with that of organs far removed.

## PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M.D.,

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College Hospital.

## WATER SANITATION.

The question of the value of filters for the purification of drinking water has been examined by Bertschinger (*Gazette med. de Nantes*, July, 1890), who found that sand filtration removed nearly if not quite all the germs from the water of Lake Zurich, yet, some time after filtration, the water contained a few organisms. Fraenkel and Piefke (*Zeitschr. f. Hygiene*, 1890) found that at the beginning and after long use, bacteria pass through sand filters, and that the number which pass depends largely upon the rapidity of the filtration. They found that during an epidemic of typhoid fever in Berlin in 1889, the people who suffered most used the water filtered through sand; and it was suspected that the condition of the filter at the time might have aggravated the outbreak. Experiments made with water containing the organisms of typhoid and cholera showed that both of these organisms passed through the filter in numbers proportional to the rapidity of the filtration.

After the filter has become fouled by use, the number of organisms in the filtered water are more than in the unfiltered.

Austin Devonshire (*Sanitary News*, June, 1890) describes the process used in Antwerp, consisting of a layer of powdered or spongy iron, made by heating hematite ore. William Anderson has devised an apparatus by which the powdered iron is revolved in a cylinder as the water is made to flow through the latter, by which means it is claimed there is a thorough purifying of the water before it is passed through the sand filters. This process is being developed in Chicago for the purification of drinking water, and it is claimed that it is the best form of filtration now known. It does not become foul by use as does sand and charcoal filters.

Alterhoefer (*Centralblatt f. Bacteriol.*, July 25, 1890) finds that the addition of peroxide of hydrogen, in the proportion of 1 to 1,000, to water containing typhoid or cholera bacilli, is sufficient to destroy these organisms, if the peroxide be fresh and in good condition and is allowed to act for twenty-four hours.

Chancellor (*Sanitary News*, Sept. 4, 1890) thinks that all manufacturers and trades people should be compelled to purify their waste waters before discharging them into public waters. He quotes Jennet's experiments to prove that alum added to natural

waters, in the proportion of 2.3 grains per gallon of water, renders it drinkable, even when full of organic matter.

Profs. Austin and Leeds have shown that a much less quantity is sufficient. Leeds found that waters rich in organic matter, peaty water, which had been treated with alum and then filtered, were sterilized by this process. No alum is left in solution unless an excess is used.

The effect of freezing upon the purity of water has been investigated by the Massachusetts Board of Health (*Sanitary News*, August 30, 1890). In ice from polluted waters, the experiments showed that freezing removes a large part of the color and the salt. That all but thirteen per cent. of the other impurities were removed.

The organic impurities of all ice examined, except snow ice, equals twelve per cent. of the impurities of the water from which it was formed. The organic impurities in clear ice are six per cent. of those in the water. The bacteria in ice from polluted waters are greatly diminished. The average number of bacteria in a cubic centimetre of twelve samples of ice from the most polluted sources was one hundred and thirty-eight.

The Board warns the public against the use of ice, for domestic purposes, that is obtained from a source polluted by sewage beyond that allowable in a drinking water; and in general, it is much safer to use for drinking water that portion of ice that is clear and transparent.

Charles G. Courrier states (*Med. Record*, June 14, 1890) as the result of his experiments, that the charging of water with carbonic acid gas does not render polluted waters safe to use. He observed that certain kinds of bacteria increase to a certain degree in waters charged with carbonic acid under a pressure of one hundred pounds to the square inch.

The author says that a temperature of 158° F. maintained for fifteen to thirty minutes will destroy the organisms of malaria, cholera, typhoid fever, diphtheria, or the suppurative processes. Merely raising water to the boiling point and then allowing it to cool, makes it safe for drinking purposes, but does not completely sterilize it; the organisms remaining being harmless. To destroy all the micro-organisms it is necessary to keep the water at the boiling point for one hour. It may then be used to irrigate wounds with safety or to prepare alkaloidal solutions, which will keep indefinitely, provided it is not contaminated subsequent to the treatment.

## OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

## ON THE ACTION OF TUBERCULIN ON OCULAR TUBERCULOSIS IN RABBITS.

Alexander (Hirschberg's *Centralblatt f. p. Augen.*, June and July, 1891) gives the results of injections of tuberculin in rabbits in which ocular tuberculosis had been produced by inoculation. Four animals were experimented upon, one serving as a control. The tuberculin was used only after distinct local evidences of tuberculosis had manifested themselves. It produced practically no general reaction, even in considerable doses (up to 0.4 gm.). The results of a careful histological examination of the enucleated eyes may be summarized as follows:

I. In the three inoculated animals treated with tuberculin, the process was not arrested, but progressed steadily. It could not, however, be denied that tubercular granulations and pus were most abundant in the animal used for control and to which no tuberculin was given.

II. The necrosis of tuberculous tissue was about the same in all four animals, the control animal showing perhaps fewer small isolated areas.

III. Remarkable was the occurrences of hæmorrhages in the injected cases while such absolutely failed in the control animal. This tendency to hæmorrhage has been already alluded to by Virchow in his remarks before the Berlin Medical Society on the action of tuberculin.

IV. Bacilli were found in all nodules, but decidedly more numerous in the injected cases than in the control animal in which larger colonies were absolutely wanting.

V. The form and appearance of the bacilli were throughout normal.

These results are similar to those obtained by Baumgarten (*Berl. klin. Woch.*, 19, 1891), save that the latter used larger doses and obtained more local and general reaction. The inoculated eyes seemed to be more rapidly destroyed under treatment than without.

## THE ORIGIN OF INFLAMMATION AND THE ACTION OF AGENTS EXCITING IT.

Perhaps the most important publication, both in its general and special bearings, which has of late appeared in the field of ophthalmology is the above work by Prof. Th. Leber, the result of eleven

years of patient and almost uninterrupted labor. It is a work of over five hundred pages with sixty-five carefully executed illustrations, and is arranged in four parts, as follows :

- I. Inflammation caused by fungi.
- II. Inflammation caused by bacteria.
- III. The properties of certain extracts from bacteria capable of exciting inflammation and the active substances therein contained.
- IV. The action of different chemical substances in exciting inflammation.

I. The question whether vegetable fungi are able to develop in the living body and to excite inflammation has until very recently been answered in the negative. In 1879 Leber discovered that a case of corneal inflammation following injury was caused by infection with *aspergillus*, and convinced himself that pure cultures of vegetable fungi could develop in animal tissues previously perfectly healthy, and by their development alone without subsequent infection with bacteria excite severe purulent inflammation. This property is possessed, however, only by certain varieties of fungus (*aspergillus fumigatus*; *penicillium glaucum* only growing in the dead cornea). However, the development of *aspergillus* in a corneal wound apparently occurs but seldom. On the surface of the conjunctiva the spores are entirely harmless. Experimental injections in the anterior chamber and the vitreous are followed by development of the fungus and purulent inflammation.

The injection of a small quantity of a pure culture of *aspergillus* spores into the middle of a rabbit's cornea is followed even on the next day by the first signs of a beginning inflammation. The eyes are congested, the point of injection loses its transparency. By the third day this cloudiness is much more marked, and increases subsequently to a large rounded spot in the cornea with loss of epithelium, between which and the corneal margin a closed ring of purulent infiltration forms. This ring increases in size by the extension of its outer margin, its inner edge retaining its original position, and is a suppurating line of demarcation between the infected and the healthy tissue. Hypopyum is also present. After five to six days the inflammation begins to subside, the infiltrated ring becoming an ulcer. Sloughing of the central portion follows, involving either a part or the whole thickness of the cornea. Even on the day after the injection there is an active growth of the mycelium, which in a few days may extend through the entire thickness of the cornea over an area of five to six millimeters. The coarse mycelium fibres penetrate the firm cornea in all directions without hindrance.

But with the appearance of the ring of demarcation a check is put to the further extension of the fungus. Corresponding to the loss of epithelium there is a circumscribed endothelial defect as well. The corneal corpuscles become invisible in the area involved in the fungus growth (necrosis). In the ring of demarcation pus corpuscles are densely packed together, and leucocytes with fibrin are also found in the corneal limbus and the surrounding conjunctiva. In the anterior chamber there is hypopyum with fibrino-purulent exudation and coagulability of the aqueous. The endothelium is not the source of this suppuration, nor does the mycelium grow into the anterior chamber. (In one case before a line of demarcation formed the fungus reached the corneal margin and involved the exudation on the iris and even the vitreous.) The iris is infiltrated with leucocytes and the vitreous becomes fibrillar. The process of healing is similar to that of other corneal ulcers.

*Penicillium glaucum* and *aspergillus nigr.* do not grow in living cornea, the undeveloped spores being taken up by the leucocytes and but slight inflammatory reaction following.

*(To be continued.)*

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## DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M. D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

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### ASEPTIC METHODS IN NASAL SURGERY.

J. O. Roe in "Medical News" strongly advocates strict asepsis in after-treatment of operations upon nose. The open dressing leaves the wound free to every source of infection, and even dressings of medicated wool and gauze are irritating and do not prevent access of nasal secretions, which contains dangerous germs of disease.

The procedure advised by author is following :

Nasal cavity first thoroughly cleaned with warm alkaline antiseptic solution, such as boric acid or bichloride of mercury, 1-4000.

Instruments sterilized.

Sterilized cocaine applied for anæsthesia.

After operation wound bathed in above antiseptic solution.

Wound then dried and covered with iodoform.

Nostril is next plugged with thin plates of metal covered with bichloride cotton. These plugs must be so fitted to nostril as to make equable pressure on whole wounded surface and to exclude air without causing much discomfort to patient.

If wound so extensive as to involve upper and lower parts of nostril, two plugs may be used.

When plug removed the nostril should be washed, dusted with iodoform as before, and fresh plugs inserted.

This second plug may generally remain until wound sufficiently healed to require only antiseptic irrigation, which should be done three times daily until wound completely healed.

For this method the author claims :

1. Hæmorrhages do not occur, nothing more than slight oozing.
2. No septic infection possible, as formation of pus prevented.
3. Frequent cleansing and manipulation not necessary, as dressings may remain untouched for from four to six days.
4. In severe epistaxis this procedure is preferable to plugging posterior nares.
5. This form of dressing prevents adhesions, and after operations in which septum has been fractured or bent, a better result is obtained than from metallic clamps.

#### THE THROAT AND NOSE COMPLICATIONS OF SCARLET FEVER.

Dundas Grant in "Journal of Laryngology" reports statistics of 1,008 cases of scarlet fever.

In 69 of these occurred a primary pyrexial adenitis, 17 suppurating. Purulent rhinitis in 58 cases. This was frequently associated with otorrhœa.

Ulcerative stomatitis in 27 cases.

Secondary tonsillitis in 12 cases.

In no case did diphtheria make its appearance.

In those severe forms of throat and glandular affections author advocates washing out throat with chlorine or boracic acid solution and applying fomentations.

#### ARISTOL IN TREATMENT OF DISEASES OF THROAT AND NOSE.

Wendell C. Phillips in "N. Y. Medical Journal" strongly advocates aristol as antiseptic.

Aristol is composed of iodine and thymol, and is chemically known as iodide of thymol.

It is a fine yellow-red powder, non-odorous and non-toxic.

Soluble in ether, chloroform and fatty oils; sparingly soluble in alcohol and insoluble in glycerine.

As an antiseptic it is equal if not superior to iodoform.

Aristol may be insufflated pure, combined in an ointment or spray in solution. The latter is most convenient and most thorough way in which to apply the drug. It may be used in solutions of from 20 to 40 grains to the ounce.

The author reports on ten cases of ozæna treated by spray of aristol in solution in liquid petroleum, 30 grains to the ounce.

Crusts of inspissated mucus should first be removed, then spray used night and morning. The odor of breath has disappeared entirely in every case in from two to five days.

A copious flow of mucus is induced by use of aristol, which lessens the formation of mucous crusts and encourages a more healthy condition of mucous membrane. Aristol is valuable, therefore as stimulant as well as antiseptic.



## CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

### TREATMENT OF WHOOPING-COUGH.

An infusion of thymus vulgaris (garden thyme) has been used with good results by Noevius in about one hundred cases of whooping-cough. He employs it in double the strength employed by Johnson (who first introduced it), namely, thyme 100.0, water 700.0, syr. altheæ 50.0, of which the dose is one to two teaspoonfuls every hour till eight to twelve doses have been taken; the course to be repeated the next day. Sometimes a slight diarrhœa, probably due to the syrup, develops after two or three days. The effect upon the cough was always very prompt, its character being changed to that of a slight cold. (Therapeutische Monatshefte, July, 1891.)

### DERMIC METHOD OF ADMINISTERING QUININE TO CHILDREN.

Prof. I. V. Troitski (Vratsh, April 18, 1891) objects to this method of administering quinine even in cases of an irritable condition of the gastro-intestinal tract. He states that the degree of absorption by this method is not yet known, and *à priori* one may suppose that it varies with the physical condition of the patient. The best



place for the inunction, he thinks, is the thorax posteriorly. The quinine is best absorbed when prepared with glycerine and alcohol. After the inunction the presence of the quinine is detected in the urine, but the amount absorbed into the blood is too insignificant to have any antipyretic action. If there is any, it is due mostly to the alcohol used with it. In children above seven years of age the absorption becomes insignificant in amount. (N. Y. Med. Jour., July 18, 1891.)

[After a great deal of experience, I have found that a most excellent way of administering quinine by the dermic method is to employ chloroform and vaseline as vehicles: ℞ Quiniæ muriat., ʒ i, chloroform, ʒ i, vaseline, ʒ i. M. Of this an amount containing the desired dose of quinine is rubbed into one of the following places, taking a new place for each dose, in rotation: the inner aspect of the thighs, the sides of the chest posterior to the pectoral muscle. I have many times had the physiological effects of the drug, showing that it had been absorbed.—F. H. S.]

#### HEADACHES IN CHILDHOOD.

Jules Simon (*Gaz. des Hôp.*, Nos. 36 and 37; *Rev. des Mal. de l'Enf.*, May, 1891) recognizes seven different groups of headaches:

1. *The Headaches of Growth.*—They are frontal, exaggerated by work, coincident with pains of the joints, periosteum and cardiac hypertrophy. Treatment: Muscular rest, tonics, good food, phosphate of lime, beer and malt.

2. *Headaches from Mental Strain.*—The children are either very intelligent and excitable, working very hard, or, on the contrary, they are those of late mental development, who have difficulty in pursuing their studies. Treatment: In the first class of cases, cessation of mental work, physical exercise of all descriptions, without fatigue, and hydrotherapy; in the second class, a moderate amount of mental and physical exercise.

3. *Headaches from Digestive Disturbances.*—In children who eat too often, or too much, or too rapidly, appearing in from one to three hours after a meal. Treatment: Strict regulation of diet; one of the bitter tonics before meals, warm drinks after meals; treat the constipation.

4. *Nervous Headaches.*—This form is easily recognized. It includes the headaches of those that are irritated by their surroundings, persons as well as circumstances: our future neurasthenics, epileptics, or hysterics. Treatment: Short douches, exercise, massage, valerian, aconite, and antipyrin for the hysterical

patients; belladonna and the bromides for the epileptics. Avoid colds.

5. *Rheumatic or Gouty Headaches*.—These are sometimes accompanied by intense congestive phenomena simulating meningitis. They are recognized by their hereditary antecedents, by being associated with other pains—neuralgias, arthralgias, myalgias; the urine contains a great quantity of phosphates, oxalates, and urates. Treatment: Moderate feeding, exercise in the open air, Russian baths and rubbing; laxatives, alkalies, salicylate of sodium in doses of from .25 to .30 gm.; tincture of colchicum, gtt. 10 to 15 daily.

6. *Headaches of Anæmia and Intoxication*.—In the first instance as the result of lack of fresh air, bad hygiene; in the second, by malaria, carbon monoxide, excessive medication (iodine, opium, digitalis, belladonna). Treatment: Remove the cause.

7. *Headaches Produced by Lesions of the Nerves of Special Sense*.—In the eyes: chronic conjunctivitis and keratitis, to be treated locally and with large doses of quinine; troubles of refraction, like hypermetropia and astigmatism, to be relieved by proper glasses. In the nose: polyps, hypertrophy of the turbinated bones, to be treated locally. In the ear: adenoid vegetations, otitis, foreign bodies in the external auditory meatus. (Journal of the Medical College of Ohio, June, 1891.)

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## GYNÆCOLOGY.

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BY WALTER B. CHASE, M.D.

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### CHRONIC ENDOMETRITIS.

Cain (Med. News, July 11th) states that though a few distinguished authors and teachers almost ignore this condition, the majority of gynæcologists acknowledge its frequency and importance.

It is sometimes caused by one or more acute attacks of a catarrhal, specific, traumatic or constitutional nature; sometimes by displacements, which by preventing a free circulation cause engorgement of the organ, and often (Tait says) in the majority of cases is the result of subinvolution.

As this condition causes hyperplasia and adenomatous degeneration of the glandular structure, unfitting the organ for the

normal performance of menstruation and pregnancy, resulting in hæmorrhages, muco-purulent discharges and numerous other morbid conditions, the necessity of its recognition and proper treatment is manifest. He thus formulates the treatment: Remove, so far as possible, constitutional causes; restore, if necessary, the uterus to its normal position in the pelvis; deplete the engorged tissues by all means at command; remove adenoid and fungoid vegetations if they exist, and endeavor by local therapeutic measures to restore the endometrium to a normal condition.

The indications are plain, but carrying out the treatment to a successful result is very difficult.

Owing to the want of unanimity among gynæcologists regarding the necessity for and the methods of local treatment of the endometrium, that is, the part of his article which has special interest, his treatment of general conditions and rectification of position being such as gynæcologists usually advise. He believes with Doléris, Mundé and many others that treatment should be directed to the endometrium itself.

He mentions Rheinstädter's local use of chloride of zinc; the method of Vulliet, which consists of dilating and packing with iodoform gauze, and that of Dunn, who packs the uterine cavity with boric acid. He himself believes the careful use of the curette to be the surest, speediest and safest means yet devised for the removal of fungoid vegetations and adenoid degenerations from the endometrium. He follows with an application of Churchill's iodine or diluted carbolic acid. He precedes the treatment by washing out the uterus and vagina with a 1-1000 or 1-2000 corrosive sublimate solution after Wiley's method. When this treatment fails to give relief or is inadmissible, his next reliance is the electro-chemical action of negative galvanism after Apostoli's method. This is accomplished by introducing into the uterine cavity a negative electrode insulated to near the point, the other being connected with a large pad of moistened sponge or cotton over the abdomen. The time of application should be from ten to fifteen minutes and repeated twice a week. The strength of the current should depend upon the acuteness of case and the susceptibility of the patient, the chronic cases always requiring the stronger currents. The dosage may be fixed from 10 to 300 milliamperes, though he regards the minimum dose as too small to accomplish much in many cases. It is a cleanly, safe and painless method, and while it removes the vegetations it imparts renewed tone to the diseased organ.

[Intra-uterine medication or the use of the curette in corporeal endometritis should be used with *great circumspection*, the patient remaining in a recumbent position for twenty-four hours or longer if increased pain is present, and never resorted to without the cervical canal is sufficiently patulous to insure perfect drainage. That the use of the curette and mild escharotic are needful and efficient in certain cases, I have demonstrated to my entire satisfaction.—C.]

#### COCAINE IN GYNÆCOLOGY.

Adler (Therapeutic Gazette, Aug., 1891) in a general *résumé* on this drug, says: "In *gynæcological* practice the drug has a limited field of usefulness. As a rule, in operative procedures classed under this head, general anæsthesia is to be preferred, as the patient's knowledge of the exposure of her person is often quite sufficient to unnerve her for the operation, and may even be the means of frustrating the surgeon's work.

"For slight operations and those easy of performance, such as the extirpation of vascular vegetations at the mouth of the meatus urinarius, the removal of stitches from the vagina, etc., anæsthesia from cocaine is all sufficient. For the vaginal examination of highly nervous and hyperæsthetic women, cocaine, applied to the orifice of the canal, will render comparatively easy an otherwise difficult operation. For the primary repair of the perineum, when an anæsthetic is indicated, a dossil of cotton saturated with a solution of the drug and placed in the wound will accomplish the desired purpose."

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### DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

Clinical Professor of Dermatology, Long Island College Hospital; Attending Physician, Brooklyn Hospital; Surgeon to Skin and Throat Department, Brooklyn Eye and Ear Hospital.

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#### TUBERCULIN AS A REMEDY AGAINST LEPROSY.

Dr. D. C. Danielssen, Chief of the Lungegaards Hospitals bei Bergen (Monatshft. f. pract. Dermatologie, Aug. 1, 1891). The author, probably the most erudite observer, and the one also probably of the longest experience (fifty years) in the study of the phenomena, causative and other of leprosy, in this interesting article describes his reasons for and his methods of using Koch's tuberculin in the treatment of leprosy. Nothing could be more

patient, exact, and thorough than his methods, which certainly fulfil all the demands of the most exacting advocates of the method.

He first speaks of the similitude of the microbes on leprosy and tuberculosis as microscopically seen, their analogy in respect to their conduct with staining, etc., etc.; and claims that Dr. Armauer Hansen, the discoverer of the lepra bacillus, is and was unable in many, if not most cases, to differentiate them from the corresponding bacteria of phthisis.

He was thus induced to make experiment on a number of cases (fourteen) of the different leprosy forms, five having pronounced anæsthetic symptoms, three well-marked tubercular, and six tuberculo-anæsthetic. His experimental injections have lasted from January 8th to the 8th of May of the present year. As to quantity of tuberculin injected, it has varied from 1 milligramme at a dose to as high as 320 milligrammes. In fact, his precautions and exactitude in the carrying out of the method need to be read to be appreciated.

His conclusions as to effect are entirely against the use of tuberculin, it having, as he declares, and as his able assistant, Dr. Loof, also insists, aggravated the malady, and seemed to have furnished a pabulum for its increase. In fact Dr. Loof says that during its use he found free lepra bacilli in the blood, a thing which he had never before observed under other conditions.

[In a case treated by the same method at Blackwell's Island, the same apparent reactions occurred, erythematous eruptions occurring on many regions of the body. Other observers, notably Kaposi, have seen similar eruptions and apparent exacerbations appear also during its use, but none have been seemingly so precise and painstaking as Dr. Danielssen.]

#### EXTRA GENITAL SYPHILITIC INFECTION.

In an interesting report of the Proceedings of the "Russian Syphilido-Dermatological Society" held in St. Petersburg (Monatshft f. prac. Dermatol., July 1, 1891, p. 17) will be found short histories of four cases of extra-genital syphilis, Dr. Kreundal reporting one of the upper lip in the person of a soldier. He believed this initial lesion was from a cigarette.

Dr. Levy reports three cases of nurses in the Foundling Hospital in St. Petersburg, each with a chancre on each of their breasts, one of which women he believed was infected by her own child.

## ON THE TREATMENT OF ERYSIPELAS.

Dr. Gottstein (*Therap. Monatshft.*, 1891, No. 4) confirms Dr. Wenderoth, of Göttingen, in commendation of the use of the ungt. of sublimated mercury and lanolin in erysipelas. He claims to have seen wonderful effect follow serious cases treated by the use of inunctions of 1 to 1000 of hydrarg. chlor. cor. and lanolin; recommends it also in many other diseases phlegmonous in character.

## CONTRIBUTION TO THE STUDY OF ZOSTER HYSTERICO-GANGRENOSUS.

Dr. A. Bayet (*Journal de méd. de Bruxelles*, 1891). This case occurred in the person of a domestic (female), *æt.* 18, nervous and hysteric in character, often having attacks of globus.

She first noted it on her hand after a severe nervous attack. This disappeared in less than a month. Five months afterward the same lesions, or the same sort of lesions, appeared again on the right hand and arm, true herpetic vesicles, or almost bullæ, appearing rapidly and going through the usual course, attended with the characteristic neuralgic pains, and anæsthesia moderate, and algesia also moderate, alternated; finally a moderate paresis. On the index finger there came a bulla, which finally became an ulcer. In about twenty days the eruptions and their consequences had disappeared.

It appears that Kaposi and Doutrellepont have described these cases of relapsing zoster gangrenosus hystericus, of which this, according to the author, Dr. B., is a typical example.

[The case is an interesting one to the reviewer, as such a one appeared at the skin clinic at Brooklyn Eye and Ear Hospital about two months since, in the person of a young woman of about twenty, same site, same history of relapses, extremely nervous, hysterical, etc. No absolute diagnosis at the time could be made. Herpetic sore was the diagnosis given in history book. This was doubtless of the same character as those reported above.]

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 MEDICAL JURISPRUDENCE.
 

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BY SIDNEY V. LOWELL.

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 LEGISLATION.
 

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The published volume of the Laws of the State of New York for the last session, as usual, comes with September. I note the following legislation of interest to physicians.

The act of last year as to boards of medical examiners for the examination and licensing of practitioners is awarded as follows :

§ 11. "This act shall not apply to any student who duly matriculated in some legally incorporated medical college of the State of New York before the fifth day of June, 1890, provided that such student within three months after the enactment of this amendment shall file with the secretary of the board of regents of the University of the State of New York, a certificate setting forth the fact of such matriculation, verified by the applicant and signed by the secretary of the faculty of the college in which he matriculated."

It is further provided that "This act shall take effect immediately."

The act was passed May 4th last, so the time within which it could be acted on expired August 4th.

The code of legal practice has been amended so as to enable physicians to testify as to information received from or through attendance on a deceased patient in cases where the representatives of the latter's estate waive any objection.

The reception of the medical library offered to the State by the Albany Medical College, its incorporation into the State Library, and the expenditure of State funds to the amount of \$5,000 for shelving, arranging and cataloguing it, is authorized. It is also provided that any accredited physician in the State may borrow the books on conforming to the rules in such cases of the State Board of Regents.

The sum of \$454,850 was appropriated for the establishment of State insane asylum districts, to be used in such manner as to provide accommodations for patients as follows :

Utica State Hospital.....	150
Hudson River State Hospital.....	200
Middletown State Homœopathic Hospital.....	200
Buffalo State Hospital.....	150
Binghamton State Hospital.....	127

This is in furtherance of the act passed the previous year, to break up the system of maintaining insane persons throughout the State in the various counties where they reside, the places where they were so kept being frequently entirely unsuited.

That act excepted from its provisions Kings and Monroe Counties (Brooklyn and Buffalo), these counties having large insane asylums. Great difficulty has been and is experienced in carrying out this beneficent legislation through the opposition of the per-

sons in some of the counties desiring to retain the local patronage involved. Public opinion should heartily sustain the enforcement of this act until it is fully carried out.

One of the great hindrances to the carrying out of the act was also removed by the passage of an appropriation of \$18,000 for the expenses of transporting the insane to the State asylums.

The Regents of the University were authorized to consent to the union of the College of Physicians and Surgeons in New York City with Columbia College.

The State Board of Health has secured further sums to carry out its important duties.

In the line of the article last published from the writer on "Rupture" in this journal, it may also be noted that this city is authorized to pay to asylums for the maintenance of ruptured or crippled persons not exceeding forty-five cents per day each, through the usual annual apportionment by the local Board of Estimate.

An act was also passed to further provide for the erection of public hospitals in or near this city for the reception and treatment of persons suffering from infectious or contagious diseases. There has been great delay in properly providing for these hospitals, owing, it is understood, to the opposition of land owners in the localities where it has been proposed to maintain these institutions. Local interests cannot be allowed to keep back this necessary provision for the public welfare.

The name of the State Asylum for Idiots is changed to "Syracuse State Institution for Feeble-Minded Children."

The following are a number of State institutions or departments in which, as especially treating matters of health or life, physicians are particularly interested, to which appropriations are made by the State:

St. Lawrence State Hospital (Insane).....	\$406,658
Binghamton " " " .....	188,870
Utica " " " .....	25,620
Willard " " " .....	54,600
Middletown " Homœo. Hospital (insane).....	42,450
Hudson River " Hospital (insane).....	31,000
Buffalo " " " .....	20,500
Asylums for insane criminals, Auburn and Matteawan....	135,961
State Commission in Lunacy.....	24,000
Institution for Blind, Batavia.....	40,000
" " " New York City (not State).....	25,332
Deaf and Dumb Institutions (not State).....	59,540
Syracuse State Institution, Feeble-Minded Children.....	81,000
Newark " " " " " Women.....	56,000



Shore Inspector.....	27,000
Factories " .....	4,840
Game and Fish Protectors.....	16,000
Fisheries Commissioner.....	32,500
Dairy Commissioner.....	6,000
Oyster Protector.....	1,750
Quarantine Commissioners (salaries).....	7,500
State Board of Health.....	30,000

Besides appropriations for a Babies' Hospital in N. Y. City, and a Foundling Hospital (by the head), Soldiers' Home at Bath, and various reformatories, and for the poor in various ways. The large appropriation for the insane first mentioned in this article is an exceptional expense.

There is nothing more impressive as to the complex system of modern society than a review of the appropriations and provisions in one year's statutes as to State and semi-public institutions for the relief of the poor, the sick, the insane, and the criminals. At some other time I hope to perhaps give a more extended review.

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## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the Medical Society of the County of Kings.*

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**SURGICAL BACTERIOLOGY.** By N. Senn, M.D., Ph.D., 8vo, 271 pages.  
Lea Bros. & Co., Philadelphia, 1891.

The book with the above title gives, in concise and convenient form, the results of the investigations of many of the best authors in bacteriological research as far as they have any bearing upon surgery. It supplies a need which must have been felt by the busy surgeon. As the author very pertinently remarks in the preface: "During the last fifteen years there has been more real advance made in surgical pathology than during twenty centuries preceding them. Bacteriology opened a new era for surgical pathology. . . . At this time surgical pathology has almost become synonymous with surgical bacteriology. Text-books on surgical pathology of only a few years ago are consulted in vain for information on many subjects which now attract universal attention." The object of the book is also well stated in the introduction, as follows:

“In the preparation of this work it has been my principal object to gather from the current literature, in compact form, the result of the best work by the ablest men on the various subjects which will be discussed in this book.” For the most part the different authorities have been quoted side by side without comment, no attempt being made to harmonize conflicting results, the author in some cases merely giving his own opinion. The book contains twenty-three chapters. The first nine are concerned more or less with general remarks on the connection between bacteria and surgical diseases, some of the subjects treated of being: “Hereditary Transmission of Microbic Diseases,” “Sources of Infection,” “Elimination of Pathogenic Micro-organisms,” “Inflammation,” etc.

In regard to heredity, the author holds the opinion that the placental tissues offer most favorable conditions for direct transmission of bacteria from mother to foetus, and that observation and experiment have proven that in some infectious diseases the disease is inherited in this way. In regard to the existence of pathogenic bacteria in the healthy body, the author inclines to the belief that they may be present. In the chapter on Sources of Infection he points out among others the danger of infection from the air, water, and earth. Under Localization of Micro-organisms, he points out the local predisposing causes. He holds that micro-organisms are destroyed in the body by phagocytosis and otherwise, and that they are eliminated by the excretory organs. He thinks much will be accomplished in the future by inoculations of harmless bacteria which are antagonistic to the pathogenic kinds.

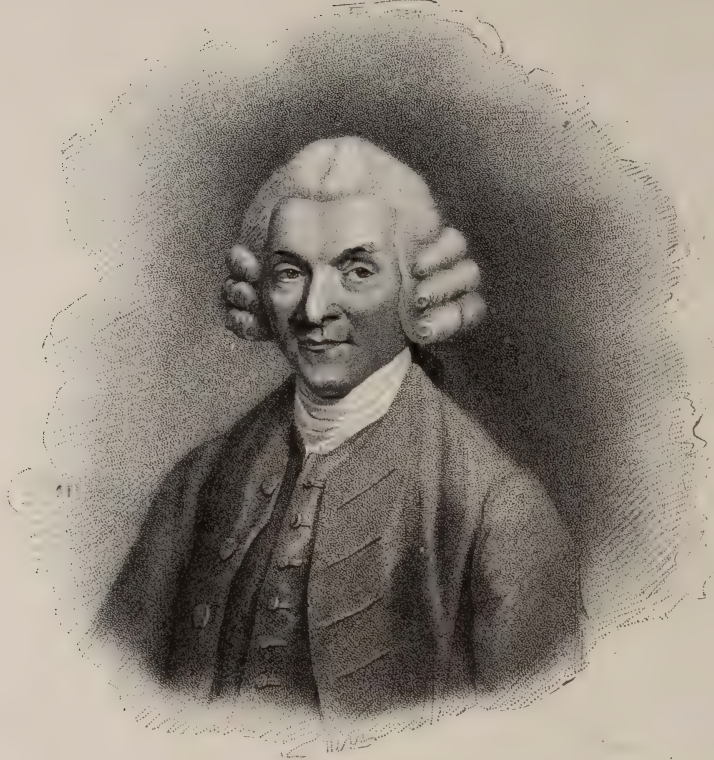
The remaining chapters treat of the special surgical diseases caused by bacteria. Of these the chapters on “Tuberculosis” and “Clinical Forms of Tuberculosis,” deserve special mention. They are quite exhaustive and give an excellent statement of the now universally-accepted views.

The usefulness of the book would perhaps be enhanced by a chapter or two upon the biology, methods of cultivation, etc., of the bacteria themselves. It is hardly to be assumed that all readers are familiar with these points, and yet this is necessary for a full understanding of the book. The two text-books the author has used for reference might have been better chosen. The illustrations are not as carefully selected as they might be, and there are hardly enough of them. The author’s use of the word typhus for typhoid might lead to confusion, as also yellow coccus for *staphylococcus pyogenes aureus*.

The work can be heartily recommended. It will be found invaluable to those who have not time for the current literature.

B. MEADE BOLTON.





WILLIAM HUNTER.

Dr. William Hunter was one of the most distinguished scientific physicians and teachers of medicine of his day.

Born on the 23d of May, 1718, at Kilbride, in the town of Lanark, he was sent at the age of fourteen to the University of Glasgow, where he spent five years, with the reputation of "prudence and good scholarship."

He was at this time designed for the church, but his theological ideas not being of the standard required by the articles of faith, and having made the acquaintance of the celebrated William Cullen, he was by him influenced to give his attention to the healing art.

He resided in Dr. Cullen's family three years, after which he entered into that singular partnership, the object of which was to allow each one to improve his medical education, to further which object one of them should be alternately allowed to study in some medical school while the other carried on the business at home and provided the "sinews of war."

Cullen took the first winter at Edinburgh. Hunter chose London for his field of study where, after a short residence with the eminent Smellie, at that time an apothecary in Pall Mall—from whose door at one time, it is said, hung a sign announcing that the art of midwifery would be taught for five shillings—Dr. James Douglas, the well known anatomist and accoucheur, offered him a place in his family as tutor to his son, and to assist him in his dissections. His attention being in this way directed to the study of anatomy, he speedily became an expert dissector and demonstrator, and in 1746 gave his first course of lectures on the subject. It is said that he experienced much anxiety and doubt at the outset, but that applause gradually inspired him with confidence, and he at length found the principal happiness of his life to consist in the delivery of a lecture.

It is said of him that he was a good orator, and, having a clear and accurate conception of what he taught, he knew how to place in distinct and intelligible points of view the most abstruse subjects of anatomy and physiology.

In the early part of his career he practiced both surgery and obstetrics; but he always felt an aversion to the former and gradually confined himself to the latter pursuit, and gradually became the principal accoucheur of London; being consulted in important cases, and physician extraordinary to the Queen.

From the seventy guineas which he carried home in a bag under his cloak as the fees from his first course of lectures, and which he told a companion was the largest sum he ever possessed, he rapidly grew to a competency which was, all that was not required for his exceedingly economical living, devoted to the building up and maintenance of the wonderful anatomical museum, only second to that of his brother John, and which is now known as the Hunterian Museum at Glasgow.

This great monument, which William Hunter has left to posterity, is by no means second in rank with his other great work, the Anatomy of the Human Gravid Uterus, which is one of the most splendid medical works ever published. It is not, perhaps, too much to say that its engravings have never been surpassed.

A period of nearly thirty years was spent in its production; the first ten plates, which are taken from one subject, were executed in 1751, but the whole work was not given to the public till 1774. It is a large folio, containing thirty-four superb plates engraved by such masters of art as Strenge, Grignior, Ravenet, Worledge, Scotin and others; the letter press being printed in Latin and English. The writer is the proud owner of a copy.

William Hunter "died in the harness"; during the later years of his life he was a sufferer from gout, and on the 15th of March, 1783, he was more than usually unwell, but insisted on delivering his regular lecture on operative surgery. Towards its conclusion he fell into a syncope and was carried out of the theatre and put to bed, and died on the 30th of the same month. His composure and resignation at the last deserve to be recorded. Turning to his friend, Dr. Combe, he said: "If I had strength enough to hold a pen, I would write how easy and pleasant a thing it is to die."



ered, and in extending its utility when applied. The apparatus consists of a bar of flat, stiff, untempered steel, to each end of which and projecting a little beyond is riveted a piece of wire gauze. For the bar, Jessop's spring steel, one-half to three-quarter inch wide and one-sixteenth to one-eighth inch thick, answers admirably. What is known as truss-spring steel, one-half by No. 16, will do for almost any child. Its length should be sufficient to allow it to extend from the upper fourth of the back of the leg, behind the heel forward to a little beyond the middle of the sole. The upper piece of wire gauze should be long enough to reach

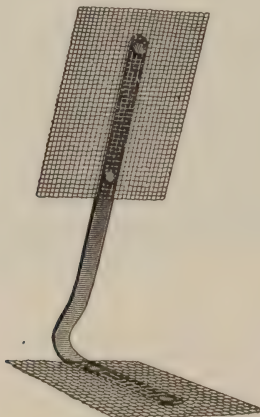


FIG. 1.

from the top of the calf to the middle of the leg, and wide enough to half encircle the limb. The lower piece is to extend from opposite the medio-tarsal joint, along the sole to the ball of the foot, and may be broad enough to come well up on the sides of the foot.

To apply the apparatus, the bar is first bent to fit approximately the posterior line of leg and foot when they are placed in the desired relation. To effect this bending, wrenches may be used; but a pair of the hooks commonly employed in orthopædic work will be more convenient (Fig. 2). In fact every surgeon who subscribes to the doctrine that it is he and not an instrument maker who should fit a brace to a patient will probably have something of the kind at hand. A few layers of plaster are applied in the usual manner to the foot and leg, care being taken that the plaster extends beyond where the wire gauze will be. The steel bar is then quickly modified so as to fit accurately, and the foot and leg held firmly in the apparatus, while the plaster is continued until

sufficient thickness over the whole has been attained. A little manipulation is necessary to mould the gauze to the parts and incorporate it in the dressing. The ends of the wires should be well covered. The steel now holds the parts firmly in position while the plaster is setting, thus relieving the surgeon from a most tiresome task, and rendering it almost impossible for any move-



FIG. 2.

ment of the patient to ruin the half-set plaster. While it is safer in some cases to steady the limb until the dressing is hard, there is no occasion to indent the plaster by manual pressure. The greatest merit of this combination of steel and plaster, however, lies in the fact that a plaster dressing is thus rendered strong enough to bear a patient's weight.

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### PRIMARY CARCINOMA OF THE LUNG—REPORT OF A CASE.

BY WILLIAM NATHAN BELCHER, M.D.,

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While temporarily acting pathologist to St. Peter's Hospital in this city during the month of June, 1891, the following case came under my observation, an outline of the history of which has been kindly furnished me by Dr. Waugh, of the attending staff of the hospital:

Patient, female, æt. 47 years, single, domestic, nativity Ireland, was admitted to the hospital May 5th, and was treated for an attack of "grip pneumonia," occurring on the left side.

She became convalescent, and, contrary to the advice of her physicians, left the hospital ten days later.

She returned to the hospital the last of May, suffering with excessive dyspnœa and marked elevation of temperature.

Physical examination and aspiration found the left pleural cavity to contain considerable sero-purulent fluid which was removed by aspiration, whereupon the patient's condition became decidedly improved, dyspnœa being at once relieved and the temperature assuming a more normal register.

In a short time, however, her symptoms again became alarming, and she was aspirated a second time, with the same results as on a former occasion.

This procedure was repeated several times during her illness, and, upon one occasion, in the last week of her life, there was noticed for the first time, under the skin, but not connected with or attached to it, a small, round hardened mass, on the anterior aspect of the chest, on the left side, at a location corresponding to the point of junction of the first rib with the sternum.

This mass was closely adherent to the structures beneath it. It was above the mammary gland, and had no relation or connection with it.

The patient's condition became progressively worse, and she died May 24, 1891.

The patient's early history, kindly furnished by Dr. James Watt, in whose family she had been a servant for some time, was absolutely negative as regards her having had at any time malignant growths in any portion of her body.

Her health had usually been good.

*Autopsy, June 25, 1891, 8 P. M., twenty-five hours after death.*—

Inspection: Body somewhat emaciated, rigor mortis not marked. No œdema of the extremities. No bulging of intercostal spaces on either side. On the anterior aspect of the chest on the left side, at the junction of the sternum with the first rib, there is a small, hard mass, globular in outline, under the skin, but not adherent to it, but closely adherent to the underlying structures.

Mammary glands on both sides atrophied, but free from nodules or points of hardened tissue.

Peritonæum: Normal. Viscera normally situated.

Thorax—*anterior mediastinum*: On removing the sternum the left pleural cavity and the anterior mediastinum to the median line



present a hard, nodular mass of tissue, yellowish-white in color, firm and resisting, involving the left pleura, the pericardial sac, and the loose connective tissue in this situation, displacing the heart downward and to the right, a distance of about three inches, and connected directly with the small mass in the chest-wall before mentioned.

The sternum is normal, the small mass of tissue having apparently grown outward through the intercostal space between the first and second ribs.

The left pleural cavity contains a number of old adhesions, and the pleural surfaces are everywhere covered with deposits of the material before alluded to.

The pleura is greatly thickened and is closely adherent to the chest-wall.

The pleural cavity also contained considerable bloody sero-purulent fluid.

The right pleural cavity contains some few old adhesions, and a small amount of straw-colored fluid, otherwise normal.

Heart: Pericardium everywhere thickened and the seat of a deposit of hard nodular tissue of new formation, and is also closely adherent to the surface of the heart.

The heart is about normal in size, consistence is soft and flabby, walls thinned, myocardium pale in color. Valves are apparently normal. The heart-muscle presents no evidences of deposit of the carcinomatous material.

Lungs—left: The left lung is poorly supplied with air, does not crepitate on pressure, and sinks in water. The lung is very heavy; its consistence is firm, hard and resisting. Its surface is hard and nodular.

Its color is a yellowish-white.

The anterior portion of the left lung over its entire aspect, from apex to base, is the seat of an infiltration of dense whitish tissue of new formation extending into the lung from its investing pleura, a distance varying from two to four inches.

Beneath this hardened tissue is an area, less dense, made up of semi-solid purulent, necrotic material, greenish-black in color.

The lower lobe, posteriorly, is fairly supplied with air, but is hypostatically congested and œdematous.

The hardened portion of the lung is absolutely non-aerated, the bronchial tubes and air vesicles having been entirely obliterated by the advancement of the newly-formed tissue, and replaced by it.

The bronchial glands are enlarged and hardened.

On gross-section the cut surface of the lung is rough and shows a border, about two inches in thickness following the pleural attachment, of new growth; the deeper portions of the lung presenting the semi-solid necrotic material before described.

Right Lung: Hypostatically congested and œdematous at base, otherwise normal. No evidences of deposit of new growth.

Spleen: Normal. No metastases.

Pancreas: Normal. No metastases.

Kidneys—left: Smaller than normal, somewhat soft in consistence, capsule a trifle adherent in places, color somewhat pale, surface granular; on gross-section, cut surface somewhat granular, markings are only fairly distinct. The organ is in commencing decomposition.

Right: The same.

Stomach: Normal.

Intestines—small and large: Normal.

Liver: Somewhat small, light in color, soft in consistence, decomposed. Organ presents no metastatic deposits.

Gall Bladder and contents: Normal.

Urinary Bladder: Normal.

Uterus and Ovaries: Normal.

Brain: Not examined.

*Microscopical Examination.*—The examination of numerous sections from the material in the lung and surrounding involvement showed the material to present the microscopic findings of scirrhus carcinoma, as shown by the arrangement of the fibrous stroma, which is fairly abundant, into alveoli of varying sizes, which alveoli enclose aggregations of cuboidal-shaped cells, distinctly nucleated.

The comparative rarity of the occurrence of this condition and its interest to the general profession, have lead the writer to present an outline of this case to the readers of the JOURNAL, with the hope that it may be worthy of at least some passing notice.

Dr. Norman Moore, of St. Bartholomew's Hospital, London, in a series of 2,360 post-mortem examinations, reports eleven primary new growths in the lungs.

The growth was a sarcoma in three cases; in all others it was a carcinoma.

A microscopic examination was made in each case.

In seven of carcinoma it occurred in males; one in a female.

The average age of the patients was forty-three years, the oldest being sixty-six; the youngest, twenty-seven years of age.

The regions of secondary growth in these cases were as follows: In two cases there were no secondary deposits. In the remaining six cases there were deposits in either the lymphatics, the liver, or the pancreas. In only one case were there deposits in the spleen, and only one in which there were deposits in the kidney.

Dr. Moore also states: "Carcinoma, when primary, originates in the small columnar cells of the glandular crypts of the bronchi.

It usually grows slowly and forms a large dense whitish mass at the root of the lung, progressing into the lungs, along the lines of the bronchi, narrowing the larger bronchi by pressure and by actual projection on their inner surface." ("Pathological Anatomy of Diseases," by Dr. Norman Moore, page 249.)

Roberts (Robert's "Practice," page 447) states: "This disease, which is exceedingly rare, is far most common from forty to sixty years of age; and more males are affected than females.

"It may be inherited. . . .

"Pulmonary cancer generally extends so as to involve neighboring parts, but is very rarely followed by secondary cancerous formations in other internal organs. . . .

"Primary cancer is particularly prone to be confined to one lung, especially the right, and is often infiltrated.

"After a time the cancerous matter undergoes fatty degeneration and softening, cavities being formed in some cases, and extravasations of blood into its substances are common.

"The vessels and bronchi are often either involved in the disease or obliterated by pressure.

"The unaffected portions of the lung texture may be normal, or various morbid changes are set up.

"A cancerous lung feels remarkably heavy.

"Extensive pleuritic adhesions are usually observed."

Bruen (Pepper's System, vol. iii, page 460) says:

"Carcinomatous disease affecting the lung-tissue is exceedingly rare as a primary process, and excites only a feeble inclination to inoculate other portions of the body. . . .

"The primary malignant formation presents a single large mass of infiltration, possibly associated with a few small nodules scattered throughout the lungs. The right lung is conceded to be the most frequently affected, but secondary cancer usually implicates both organs."

## THE WRONG AND THE RIGHT USE OF DR. KOCH'S LYMPH.

BY OSCAR EMBDEN, M. D., BROOKLYN.

When in November last Dr. Koch made public his remedy for tuberculosis and placed it in the hands, for the time being, of a small group of physicians, the German press felt it incumbent upon itself to announce to the people that a cure of most powerful and wellnigh magical action had been discovered, and that it would not be so very long before tuberculosis would cease to exist. The majority of German and a goodly number of foreign doctors allowed themselves to be carried away by the headlong and inordinate praise lavished upon the discovery by journalists and writers. Without awaiting any test of this marvelous cure, they simply one and all lauded it to the skies. It was but a logical consequence that a strong reaction should follow upon this too willing acceptance of the properties of the lymph. The cause for this is easily accounted for in the abnormal hopes and expectations so readily aroused. Again, another cause which brought the remedy into bad repute was the wrong method in employing the lymph. Probably more damage was done through ignorance than good done to humanity at large.

Having myself had an appointment at the city hospital Moabit, in Berlin, under the personal supervision of Dr. Koch, I had the opportunity to observe the outcome of a great number of cases of tuberculosis under his special charge. Therefore I would herein state my opinion concerning the many errors and mistakes made at first in the handling and employment of the lymph, and furthermore what I consider the correct and needful usage of this most wonderful remedy.

As regards consumption, two great errors were committed in its treatment. In the first place, proper care in the selection of the cases was not shown. Patients having already one, or even both of their lungs very nearly gone, were subjected to injections in the deceiving hope that some benefit might thereby accrue to them. Naturally such action could only bring discredit upon the lymph in the eyes of the laity, since whenever a sufferer of the mortal sickness succumbed to inevitable death, such decease was attributed to the newly-found remedy.

Secondly, the lymph was in the beginning used in too large doses, especially in cases of tuberculosis of the lungs, and these

doses were, moreover, increased too rapidly. Consumptives were at first given 0.003–0.005 grm., and the doctors were overjoyed when, in consequence, the temperature rose to a very high degree. Then it was said that the patient reacted against the remedy, and it was imagined that this reaction marked at the same time the beginning of the cure. With this idea, as soon as the temperature did not rise after a given dose, the latter was immediately increased to a great extent, and it was deemed very satisfactory if the temperature again reached a high point. It was soon seen that this mode of treatment was by no means the right one. By this continual fever which was artificially created in the patients, their condition already weakened by disease became visibly much worse. In some cases a great loss in weight was noticed, and the other symptoms, coughing, expectoration and lassitude, were frequently very much increased. In consequence the patients very soon became suspicious of the remedy and submitted very unwillingly to the cure.

A further great mistake seems to me to have been the attempt at an operation on the lung-cavities first made in the hospital Moabit in Berlin (cf. *Deutsche med. Wochenschrift*, 1891, No. 1 and 6). The original inducement hereto had been given by Dr. Koch himself in his first treatise on the new cure (cf. *ibidem*, 1890, No. 46 a). I had occasion personally to attend five such operations. To begin with, any man who has treated consumptives to a greater or less degree, and who has studied the condition of their lungs after death, knows well that it is exceedingly difficult in the living body to tell whether one or more cavities exists in a lung. The only justification for this operation depends upon the absolute knowledge that there is one cavity—and one only—in the tuberculous lung. This is the indispensable condition, without which no operation should be undertaken. For if several cavities exist of which only one is located, for instance in the apex, and even this one entirely cured by the above treatment, yet the others which are deeper-seated and therefore not at all to be reached, remain; and the complete cure of the phthisis is just as far off as ever.

In addition to the difficulty in finding out how many cavities there are, in the five cases just cited it proved wellnigh impossible to *exactly* place the same. A second condition in this treatment is that there be sufficient strength in the patient; therefore there must not be a large cavity—as occurs in the last stages of phthisis—but only a small or moderately large one. The general location of these cavities can be ascertained by percussion and by auscultation. But if after cutting the skin and muscles, and after removing

part of the rib the pleura is laid bare, and if then the cavity is to be opened, it is now that the difficulty arises. Dr. Sonnenburg, who had charge of these operations in Berlin, after making the pleura visible, tried to find out the exact position of the cavity by means of the hypodermic syringe, hoping that he might suck into the syringe a part of its contents. In my opinion this was in no case a positive success. Indeed, a fraction of a drop was each time withdrawn, but its origin was, in my eyes, very doubtful. At any rate it was never sufficient to positively warrant the opening of the cavity. The syringe was not a suitable instrument to exactly place the cavity, and in consequence I firmly believe that the opening of the cavities was not successful in all of the five cases. Here, then, there would be a second great difficulty in the operation, very simple in itself. Dr. Sonnenburg, who with a Paquelin thermo-cautery undertook the opening of the cavities, really believed that he had found the same in every instance. Since in four cases the cavities were hardly of the size of a small hazel-nut without secretion and had smooth surfaces, it is easily supposable that these small holes were artificially made by the thermo-cautery and that the real cavities were not found. Indeed, later on a connection with the bronchial tubes came about in all cases. This was made evident by secretion and air bubbles in the cavities, but this connection was decidedly of a secondary nature and occasioned by the gradual falling away of the lung-tissue, separating the imagined cavity from the nearest bronchial tube. That the sought-for cavities were not found was amply verified post mortem in two instances.

I have not as yet made mention of one danger which may arise during the operation, namely, that pneumothorax will occur. This happened in the first case treated by Dr. Sonnenburg, during which he operated in the fourth intercostal space on the right side. Later on he operated in the second intercostal space, because in consumptives solid growths, even to the third rib, are generally found between the two leaves of the pleura, and the possibility of occasioning pneumothorax is therefore greatly lessened. Of the five men operated on in Berlin, three died; while in the remaining two the wounds caused by the treatment healed fairly well; but naturally the phthisis remained in its previous state.

As a cure for lupus, from the very beginning the lymph was looked upon with great hopes, since in this disease, on account of its exterior situation, the conditions for success appeared most favorable. Injections were made for weeks, aye, for months. Changes were clearly visible in the tissue of the lupus. At first considerable

swelling allied with exudation and a redness of the tissue were noticeable. Later desiccation, leaving scabs behind, were perceived; but only in very few cases indeed was a real cure effected. A combat between the disease and the remedy was here quite evident; but the supposition that this would end in a victory for the cure showed itself as erroneous. The reason is found in the fact that the lupus generally is too deeply rooted, so that the lymph *alone* is not able to drive to the surface all the affected parts and to bring about a perfect cure. That an attempt at a cure was made by the remedy was easily seen in the fact that at the edges of the affection the lupus receded.

Another mistake was made in the treatment of tuberculosis of the bones and joints. When injection of the lymph was *alone* resorted to, in the cases of articulations not opened with the knife, an amelioration was only effected in the rarest instances. Very often a change for the worse came about, since in consequence of the remedy the exudation in the articulations was increased and a reabsorbing of the possibly dead tuberculous tissue did not occur. Thereafter the joints swelled even to a greater size, became more painful, and a continuous fever developed as a consequence of the injections. At other times unsatisfactory incisions in any tuberculous joint were made, and it was thought that the much-praised remedy, the matter only being removed, would do the rest and bring about a complete cure. Greater secretion of matter followed, retention of the same was noticeable and caused higher fever, and the patient became more and more run down.

Having thus briefly described the misuse of Dr. Koch's discovery, it will surprise no one that its efficacy as a cure rapidly fell in public estimation. Yet the fault lay not with the lymph, but to a great extent in the entirely wrong use made of the same at first. As soon as a change is made in the treatment, the results will be very different and very much for the better. In my opinion the lymph must be employed not with the idea that it *alone* is a sure cure, but that in combination with other tried and well-known remedies of tuberculosis, it will bring about at least a visible hastening of the cure. Therefore, patients must be treated with all dietetic and hygienic remedies at our command, and in addition—in certain special cases—a careful use of injections can be introduced. Only such cases are, however, suited for this treatment in which the tuberculous affection has attacked not more than the apex of *one* lung. All instances in which both lungs are diseased must be excluded from the very beginning, since a cure is here not to be thought of. I am firmly convinced that with right

use of tuberculin in the first-named cases, a change for the better will almost always occur both in the subjective as well as in the objective condition of the patient, especially increase of bodily weight. Too large a dose must, in the beginning, carefully be avoided, and later on the increase must be very gradual indeed. I would recommend in general to begin with 0.00025 grm., and, if hereupon no fever reaction follow, to inject on the next day 0.0005 grm. Should fever again not show itself, let the dose be increased daily by 0.00025 grm., carefully observant whether fever occur. Should the same arise, let one or two days be omitted immediately and inject the next time 0.00025 grm. less than before. If such treatment be carefully continued for weeks, 0.1 grm. will be attained without ever having occasioned any reaction in the fever. This dose can be used for some time; then it is advisable to wait a few weeks, and finally to begin with 0.01 grm. and to increase anew to 0.1 grm. To exceed the dose of 0.1 grm. is useless. Naturally in every instance the individual himself must be closely watched, since one case of tuberculosis under such treatment will react sooner than another. A reason for this it is not possible to find.

Larger doses in the beginning are only permitted in order to make certain of the diagnosis in doubtful cases. Then 0.002 or 0.003 grm. can be given at first and daily increased by 0.001 grm., until a greater fever reaction is brought about. Should this latter take place after a few milligrammes, then tuberculosis is very probable; should it only arise after increased doses, then its existence is doubtful. So much for the use of the lymph in the case of pulmonary phthisis.

It seems to be self-evident that the erroneous attempt to operate on the cavities of the lungs must be abandoned.

In cases of lupus I consider it advisable to inject the lymph for some time until undoubted changes are seen in the tissue of the lupus following upon the injections. Should these no longer be brought about, an energetic surgical treatment is then the only commendable one. Let the diseased lupus tissue be scraped away with a sharp curette, and after this let the tissue, if possible, be burnt out with the thermo-cautery. Then begin immediately again with the injections, and it will soon be seen that the healing of all the parts treated in this manner is far more rapid than was customary according to former experience. The recurrence of lupus in the scars which was so prevalent in the former mode of treatment will be very rare, if at the same time the application of Dr.



Koch's remedy be used. In a word, lupus will in this way be cured much quicker and more thoroughly than formerly.

In the cases of lupus and in those of tuberculous bones and articulations the doses need not be so sparingly employed as in pulmonary phthisis. Of course it is understood that tuberculosis of the lungs must not at the same time exist. With grown persons it is perfectly feasible in the above-mentioned instances to begin with 0.002 grm. and to increase the dose daily by 0.001 grm., until fever reaction occurs. As soon as a higher temperature is noticed, let the dose which occasioned the same be continued until the fever disappears. Then again the increase by 0.001 grm. must begin. With small children the dose is in all cases about one-tenth of the above; with older children not much less may be given than with mature persons.

As regards the treatment of tuberculous bones and joints, it must be added that here an immediate and thorough surgical operation, combined with the careful removal of all tuberculous tissue, is the only mode of procedure. But here also the remedy is well able, when used in the same manner as in the case of lupus, to materially hasten the cure, which in most instances is so wearisome and tedious. Relapses and new fistulas will with this treatment be much less often than formerly.

In regard to tuberculous swellings the lymph, according to the most varied observations, is almost entirely without effect.

Naturally the treatment by injections with the lymph is a mode of procedure which must be continued for months, even for years, in order finally to bring about the desired cure. But even if this treatment be applied as long as possible, if after shorter or longer intervals the injections are begun again, the sought-for end will still not be attained, we shall have to be content with a greater or less amelioration only. But a better condition of the patient, as above said, will almost always be effected.

The treatment by small doses has moreover the great advantage that every physician even during his office hours can apply the same, without any danger of being startled after a few hours with disagreeable symptoms of collapse, as often happened in the former mode of treatment. The patient can himself make use of the thermometer and take his temperature at regular intervals, six, eight, ten and twelve hours after the injection, at which times, according to experience, the reaction fever most frequently occurs. Therefore the injections are best given in the morning, in order that the resulting rise of the temperature may not happen during the night.

Finally, I would briefly recapitulate my opinion that the lymph of Dr. Koch, when a careful selection of cases adapted to the same is made and a correct treatment applied, is a remedy which will cause most satisfactory results. Consequently I would consider it highly advisable that every practicing physician should convince himself of the truth by using the lymph. Then the bad repute in which the remedy is now held would soon disappear and the value of the same as a cure would be established firmly and without any prejudice.

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### CANNABIS INDICA AS AN ANODYNE AND HYPNOTIC.

BY J. B. MATTISON, M.D.

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Read before the Medical Society of the County of Kings, September 15, 1891.

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Indian hemp is not a poison. This statement is made, just here, because the writer thinks a fear of its toxic power is one reason why this drug is not more largely used. This mistaken idea lessens its value, because it is not pushed to the point of securing a full therapeutic effect. This is a fact. One of the best pharmacologists in this country not long since expressed a very touching solicitude lest the writer's advocating robust doses of this valued drug might cause a decrease in the census that would seriously imperil his professional good repute.

There is not on record any well-attested case of death from *cannabis indica*. Potter says: "Death has never been produced." Hare asserts: "No case of death from its use in man is on record." Bartholow affirms: "Cases of acute poisoning have never been reported." Stillé states: "We are not acquainted with any instance of death." Wood declares: "Hemp is not a dangerous drug; even the largest doses do not compromise life. No acute fatal poisoning has been reported." A prolonged personal experience, compassing the history of many cases—men and women—and hundreds of doses, ranging from 30 to 60 minims of the fluid extract, has never brought any anxiety along toxic lines.

Having thus brushed aside this bugbear, we may note, *en passant*, the statement, on high authority—Potter—that "*cannabis* was formerly much employed as an anodyne and hypnotic. It is now somewhat out of fashion." Why this early repute has not been continued, is due to a cause cited, coupled with non-reliable products, and, doubtless, the coming of other analgesic-soporifics.

The first cause need not longer obtain; the second can be removed by careful choosing and trial; while the last should not preclude the use of a drug that has a special value in some morbid conditions, and the intrinsic merit and superior safety of which entitle it to the place it once held in therapeutics. Digitalis, for a time, was in disuse. So, too, codeine, which my experience has proved a valued anodyne—one worthy a wider use than it has had, and which I think it will surely get—and impelled me to present the American Medical Association, at its last meeting, with a paper thereon, that I trust you have done me the honor to read.

There is a consensus of opinion among writers on therapeutics as to the anti-agryptic, analgesic and anæsthetic power of Indian hemp. For the latter it was used prior to ether. Wood, testing it in himself, asserted "marked anæsthesia of the skin all day." Stillé says: "Its anæsthetic virtue is shown in allaying the intense itching of eczema, so as to permit sleep." And that a similar seemingly trivial disorder may have a serious outcome is proven by the fact that a well-marked case of triple addiction, under my care last year—a medical man who took daily 15 grains morphine with 35 grains cocaine, subcutaneously, and 14 ounces of rum—had its rise in a morphia hypodermic taken to relieve urticaria.

Stillé says: "Its curative powers are unquestionable in spasmodic and painful affections." Noting the latter in detail, its most important use is in that opprobrium of the healing art—migraine. In a paper by the writer, eight years ago, "Opium Addiction among Medical Men,"—*Medical Record*, June 9, 1883—in reviewing the causes, this was asserted the most frequent. Enlarged experience has not changed that opinion. A case from such cause, woman, ten years morphia taking, 30 grains, by mouth, daily, is now under my care. A sister, so situated, from the same cause, awaits similar service; and their mother took morphia for headache till death ended her need.

Ringer says: "No single drug have I found so useful in migraine." He thinks it acts well in all forms, but seems most useful in preventing rather than arresting. He deems it specially effective in attacks due to fatigue, anxiety, or climacteric change. Dr. E. C. Seguin, in 1877, commended it highly.

Dr. Wharton Sinkler, in a paper on migraine, gives first place to cannabis, and thinks it of more value in this form of headache than any other. Richard Green, who first commended it in this complaint, thinks it not only relieves, but cures; in nearly all cases giving lasting relief.

In the *British Medical Journal*, July 4, 1891, Dr. Suckling, Prof.

of Medicine, Queen's College, Birmingham, writes: "I have during the last few years been accustomed to prescribe Indian hemp in many conditions, and this drug seems to me to deserve a better repute than it has obtained." He calls it "almost a specific" in a form of insanity peculiar to women, caused by mental worry or moral shock, in which it clearly acts as a psychic anodyne—"seems to remove the mental distress and unrest." After commending it in melancholia and mania, he says: "In migraine the drug is of great value; a pill containing one-half grain of the extract, with or without a one-quarter grain of phosphate of zinc, will often immediately check an attack, and if the pill be given twice a day continuously, the severity and frequency of the attacks are often much diminished. I have met with patients who have been incapacitated for work from the frequency of the attacks, and who have been enabled by the use of Indian hemp to resume their employment." In a personal note from the doctor he wrote: "I have used Indian hemp as an anodyne and hypnotic, and find it most useful in both ways. I have never seen any ill results."

Anstie commends it in migraine and the pains of chronic chloral and alcohol taking. In his work on neuralgia—the best ever written, and one which I advise every one to read, if not read—he says: "From one-quarter to one-half grain of *good extract* of cannabis, repeated in two hours, if it has not produced sleep, is an excellent remedy in migraine of the young. It is very important in this disease that *the habit of long neuralgic paroxysms should not be set up.*"

Russell Reynolds thinks that in neuralgia, migraine and neuritis, even of long standing, it is by far the best of drugs. Mackenzie has used it with much success in constant all-day headache, not dependent on anæmia or peripheral irritation. Bastian and Reynolds commend it in the delirium of cerebral softening, and the latter says it calms the head pain and unrest of epileptics. In cardiac tumult, in senile insomnia and delirium, and the night unrest of general paresis it acts well.

In some diseases common to women hemp works well. Grailly Hewitt says that in many cases of uterine cancer it allays or prevents pain. Ringer asserts it sometimes signally useful in dysmenorrhœa. West commends it here. Potter states that its anodyne power is marked in chronic metritis and dysmenorrhœa; and Hare thinks it of great value in chronic uterine irritation and nervous and spasmodic dysmenorrhœa. Donovan and Fuller claim it of value in migraine and chronic rheumatism; and Mackenzie in hay fever and hay asthma.

In genito-urinary disorder it often acts kindly—the renal pain of Bright's disease; in vesical spasm; retention of urine, and chordee; and it calms the pain of clap equal to sandal or copaiva, and is less unpleasant. The distress of gastric ulcer and gastrodynia are eased by it, and in other and varied neuralgias it serves one well. In some cases of advanced phthisis and other cureless disease it will bring euthanasia by allaying pain and unrest.

My experience with hemp covers more than a decade, many cases, and several pounds of fluid extract. It is proper to state that these cases have been solely habitués or ex-habitués of opium, chloral or cocaine. In these, often, it has proved an efficient substitute for the poppy. Its power in this regard has sometimes surprised me. Both sexes took it, and with some no other drug anodyne was used. One of these—a naval surgeon, nine years a 10 grains daily subcutaneous morphia taker—recovered with less than a dozen doses. My oldest female patient—64—found its service complete. Its action has varied, as some cases respond more fully. This during the early abstinence time. Later, it has done good in the post-poppy neuralgiæ, especially the cranial kind, and it has calmed mental pain and unrest.

As a hypnotic, Frommuller gave hemp in 1,000 cases. Success, 530; partial success, 215; no success, 253. As such in delirium tremens, Potter declares it "the best." Anstie thought it better than opium when the pulse is feeble. Phillips asserts it "one of the most useful." Tyrrell and Beddoe say the same. Suckling's opinion has been given. McConnell commends it in the insomnia of chronic cardiac and renal disease. Oxley lauds it in the insomnia of severe chorea, especially in children; the tincture "more effectual than any other hypnotic."

My own results prove it a satisfactory soporific, even oftener than as an anodyne. And this, too, under conditions that test thoroughly the power of any drug in this regard, for the insomnia of ex-poppy habitués finds its equal only in the agrypnia of the insane. With many, no other hypnotic was used. The sleep has been sound and refreshing. Many cases showed a notable influence to it as regards time—somewhat akin to sulfonal. Two hours sufficed. The first, pleasant stimulation; the second, increasing drowsiness, ending in sleep.

Again, I admit my special cases may involve a condition making them more easily subject to hemp hypnosis, but these do not preclude the wisdom of its trial with other patients in whom it may act equally well.

Writers on cannabis refer to certain peculiar effects—which, in

our thinking, are more often peculiar to the patient—that may here be noted. One is a mild intoxication. I say “mild,” because the hashish, assassin-like, running-a-muck form is less fact than fancy. It is said temperament largely determines the mental effect whether it be grave or gay, merry or mad. Most of my cases—when such—have been in a merry mood. Of the hundreds of times given, only once did it excite to violence. That was a young physician, six years ago, in which it came close to a personal assault on the writer that was warded off only by superior strength. The patient afterward avowed no knowledge of such a situation, was profuse in apology, and stated that once, after taking hemp simply to note results, he routed every one out of the house, including his own grandmother!

Catalepsy is a rare sequence. We have seen it once. A woman, 23, brunette, small but active, took, in early evening, 40 minims Squibb's fluid extract as a soporific. After playing cards half an hour, she began to be very jolly, and it was suggested she retire. Visiting her later, she was found completely cataleptic. It soon subsided, sleep followed, and no ill-effect.

Failure with hemp is largely due to inferior preparations, and this has had much to do with its limited use. It should never be called inert till full trial with an active product proves it.

Wood thinks the English extracts best. I have used, mainly, Squibb's fluid extract. To a small extent, Parke, Davis & Co.'s Normal Liquid. They are reliable. Hare commends the solid extract made by the latter, and by McKesson & Robbins.

Merck has produced two elegant and efficient extracts—cannabine tannate and cannabinone. They are essentially hypnotic. I show you specimens. The former has been found by Prior, Vogels-gesang, Mendel and others, a satisfactory soporific. Prior gave it one hundred times, to thirty-five persons—the most with success. In hysteric cases not calmed by chloral or opium, it acts specially well. In the small dose of one grain it has brought sleep when one-third grain morphia failed.

Another cause of failure is too timid giving. I am convinced that the dose of the books is, often, too small. The only true way is, once a good extract, push it to full effect. My doses have been large—40 to 60 minims of the fluid extract—overlarge for the non-narcotic habitué; but, as we years ago asserted, habitual poppy taking begets a peculiar tolerance of other nervines, and they must be more robustly given. Both sexes have taken them—women frequently—with no other effect than quiet and sleep. I think, for many, small doses are stimulant and exciting; large ones,

sedative and quieting. They are the outcome of an experience with smaller doses that failed of effect desired. They prove hemp harmless, and they add proof to the opinion of most neurologists that, once a nervine needed, it is often better to give one full dose than several small.

The tincture—3 grains to the drachm—may be given in doses of 20 to 60 minims. The fluid extract, 5 to 20 minims. The solid extract,  $\frac{1}{2}$  to 2 grains. Tannate of cannabin, 5 to 15 grains. Cannabinone,  $\frac{1}{2}$  to  $1\frac{1}{2}$  grains. Cannabinone with milk sugar, 5 to 15 grains, and each repeated or increased till a full effect is secured. It is said that in women cannabinone acts twice as strongly as in men. In headache, periodical or long continued,  $\frac{1}{2}$  to 2 grains solid extract may be given each hour or two till the attack is arrested, and then continued in a similar dose, morning and night, for weeks or months. It is important not to quit the drug during a respite from pain.

I close this paper by again asking attention to the need of giving hemp in migraine. Were its use limited to this alone, its worth, direct and indirect, would be greater than most imagine. Bear in mind the bane of American women is headache. Recollect that hemp eases pain without disturbing stomach and secretions so often as opium, and that competent men think it not only calmative, but curative. Above all, remember the close genetic relation of migraine relieved by opium, to a disease that spares neither sex, state nor condition.

Dr. Suckling wrote me: "The young men rarely prescribe it." To them I specially commend it. With a wish for speedy effect, it is so easy to use that modern mischief-maker, hypodermic morphia, that they are prone to forget remote results of incautious opiate giving.

Would that the wisdom which has come to their professional fathers through, it may be, a hapless experience, might serve them to steer clear of narcotic shoals on which many a patient has gone awreck.

Indian hemp is not here lauded as a specific. It will, at times, fail. So do other drugs. But the many cases in which it acts well, entitle it to a large and lasting confidence.

My experience warrants this statement: cannabis indica is, often, a safe and successful anodyne and hypnotic.

#### DISCUSSION :

Dr. WIGHT.—I would like to ask if the author knows of any one ever having become addicted to the use of this drug?

Dr. MATTISON.—I have never known such a case. The danger is not comparable to the risk when morphine is used.

A MEMBER.—I would like to ask whether there is any form of the drug which can be given hypodermically; and whether the author has noticed in his patients the symptom of objects appearing to be a long distance away from the subject?

Dr. MATTISON.—There is no preparation of the drug suitable for hypodermic use. The sensation described occurs. Another common symptom is a sensation of double consciousness. I think the stories published in various journals regarding its poisonous effect is one reason why the drug is so little used. It is not a poison.

Dr. HUNT.—I would like to add my mite to the doctor's testimony. As many of you know, I was a terrible sufferer from migraine; for three or four years I hardly had a day—not probably twelve hours in succession—without terrible headache. Dr. Shaw recommended *cannabis indica* to me, and I used it with good results every time, not curative; but it relieved me every time, and left my head clear, which no other drug probably would have done. I took one-quarter grain of the solid extract hourly till the pain was relieved.

I have found the quality of the drug, so far as physiological effects are concerned, unreliable; and even the drug from the same manufacturer varies at times. My neuralgia ultimately cured itself by the development of an abscess in the antrum, and with the resolution of the abscess the neuralgia disappeared.

It is in practice my principal anodyne. I use it with quinine, and I probably write more prescriptions with quinine and *cannabis indica* than quinine alone. I remember one case of a man with neuralgia for whom I prescribed one-quarter-grain pills of *cannabis indica*, with directions to repeat the dose every hour until relieved. He kept taking them for three or four hours with no relief; but he did get intoxication, and the family, becoming alarmed, called in another physician, who came to the conclusion that the man was suffering from *cannabis indica*-poisoning. He worked over him two or three hours, and succeeded in saving his life; and the result was the family ceased to be patients of mine, and he added them to the list of his patients. I have never seen any dangerous effects from the use of this drug. I have frequently seen the intoxication, but never lasting more than two or three hours.

Dr. MATTISON.—In this connection, I suggest that if any of the members see proper to prescribe *cannabis indica*, it would be well to inform the patient or friends of the possible intoxicating effects, and thus anticipate such results as Dr. Hunt has spoken of.



Dr. EVANS.—I would like to recall to some of the members a paper which I read before this Society in 1876—"A Case of Traumatic Tetanus." This patient took  $6\frac{1}{2}$  grains of the solid English extract every hour for several days. The case is recorded in the archives of the Society. Dr. Hunt and Dr. Williams also saw the patient. The patient recovered.

Dr. AULDE, of Philadelphia.—Being in general practice I cannot say that I have used cannabis indica as extensively as Dr. Mattison, who has a special field. I was very much surprised to learn of the immense doses of this drug which he recommended, and I have serious doubts as to the advisability of having that information distributed throughout the country without some qualification. For instance, there may be certain conditions in which a person is placed that lightning will not strike; for example, we might have a storm, and on account of the condition of this wall, the lightning will come along and injure all who are sitting on this side and not harm those on the other side of the room; at some other time when the conditions are more favorable those on the other side might be injured and no harm come to those on this side. The same will apply to cannabis indica. I believe that those who have suffered from the effects of morphine, or opium and other narcotics, may be influenced to such an extent that the cannabis indica, however powerful it may be, will not produce what I am disposed to call the toxic symptoms, which it does in the absence of that narcotic system. I have some doubts as to the propriety of making the statement boldly that it is not a poison. It is a poison in the sense that all narcotics are poisons.

We exercise considerable caution in a storm. There is a dispute going on now in regard to the efficacy of electricity. Some claim there is no danger no matter how strong a current is used, and others claim that serious results follow the passing of a very strong current through the system. We must always be careful in a storm, and we should seek shelter under a bush, not under a tree. So in the use of cannabis indica it is best to recommend the administration of large doses only where persons have been subjected to other narcotics, and are not liable to be affected to the same extent as ordinary persons.

I will mention one or two cases that I recall. A lady suffering from dysmenorrhœa was taking cannabis indica in solution—the fluid extract, which can be prepared extemporaneously by dropping the amount into a dry vessel, and then pouring a measured quantity of water quickly on the cannabis indica, which makes an oily, yellowish mixture, but does not precipitate the resin. This

lady, thinking the frequency of the dose not sufficient, concluded to take it more rapidly, and, as a result, in the course of an hour she felt as if she was walking on the ceiling like a fly. I think the amount taken during the hour or so was not more than five drops of the fluid extract.

In another instance a lady of neurotic temperament came to the office. I prescribed for her, and she took the medicine and lay down on the sofa, and in the course of an hour she felt better. She started for home, but about an hour afterward she came back with her husband, and she was most voluble; she was not only talking and moving about in a most active manner, but she was also much displeased with something her husband had done. He told me afterward she drove the family out of the house, called her daughter a "hussy" and other similar names. She suffered from the intoxication of the narcotic, but I did not regard it as dangerous. The next day she was comfortable.

Five or six years ago I had among my acquaintances a student of pharmacy, who was very much given to experimenting on himself. He took twenty grains of the solid extract in the course of an afternoon. He was unconscious for some considerable time, but he eventually recovered.

The effect of the *cannabis indica* given in small doses is very marked. About two weeks ago I was visiting a house where there was an old gentleman ninety years of age, who told me that for three or four months he had been suffering from persistent hemicrania on the left side, from the forehead clear over to the back. I prescribed only five drops of the fluid extract of *cannabis indica* dissolved in three or four ounces of water. He took a teaspoonful every ten minutes for an hour. About ten days later he called on me and said his headache had disappeared in about two hours after he first began to take the medicine, and had not since returned.

Dr. SHAW.—I can simply say that my experience is in accord with that of Dr. Mattison's. I have used *cannabis indica* for years, especially for hemicrania. It is not curative, but if continued, gives more relief than any other drug. I have also used it in the vague neuralgic pains met with in neurasthenic and hysterical women.

It is an excellent remedy for the headache of organic brain disease. I have made some trials of it as a hypnotic, but it was not sufficiently powerful for the class of cases in which I used it. Its anodyne properties are unquestionable; it relieves very many pains. I have made some trials of it in epilepsy, and thought I

had obtained benefit from its use in some cases. Dr. Mattison has quoted some author as recommending it in melancholia. I have never seen the slightest benefit from its use in these cases. I have never given as large doses as Dr. Mattison gives.

Dr. MATTISON.—I still maintain that Indian hemp is not a poison—in the ordinary acceptation of that term. There are few things but what, if taken in sufficient quantity, will kill. Common salt, if a large enough amount be given, will have that effect.

I wish also to distinctly decline advising the dose I use in my patients for ordinary practice. It is too large for the non-narcotic case; but I do advise a larger one than is recommended in the books.

I have made no reference to *cannabis indica* in tetanus, because my paper was in regard to its use as an anodyne or hypnotic. I commend it especially to young men, who, anxious for brilliant results, are too apt to be led away by that modern mischief-maker—hypodermic morphia. If you had seen the sorrow from that source that I have, you would be more guarded in the use of the syringe.

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THE FIRST MEETING OF THE STATE BOARD OF MEDICAL EXAMINERS was held at Albany, July 11th. The object of the meeting was to organize and to compare views in regard to the details of State examinations in medicine which must be passed by every person who wishes to practice in this State after September 1st. Secretary Dewey, of the Regents, previous to the discussions, said that during the year ending July 1, 1890, three hundred and eighteen diplomas had been presented by physicians of other States to the State Board of Medical Examination for license to practice in this State. Two hundred and thirty-one of these diplomas were endorsed by the State Board, forty-three rejected, and forty-four are still held under advisement. The Chairman was empowered to appoint a question board of six members, to consist of two from each of the separate examining boards, for the purpose of preparing a syllabus in all departments of examination except of *materia medica* and therapeutics. The conference then adjourned, subject to the call of the chair. The State Medical Society Board elected Dr. Wey, president, and Dr. Fowler, of Brooklyn, secretary, and appointed them to represent the board on the Syllabus Committee. The Homœopathic Board elected Dr. Couch, of Fredonia, president, and Dr. Paine, of Albany, secretary. Drs. Wetmore, of New York City, and Searle, of Brooklyn, were designated to represent the board on the Syllabus Committee. The Eclectic Board chose Hugh J. Linn, of New York City, president, and Edwin S. Moore, of Bay Shore, L. I., as secretary. Dr. Tuttle, of New York City, and Dr. Moore were designated to represent the board on the Syllabus Committee.

# THE BROOKLYN MEDICAL JOURNAL.

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## EDITORIAL.

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### REQUIREMENTS OF A MEDICAL EDUCATION.

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Legislation in most of the States of the Union on the subject of medical education indicates that the profession and the people are interested and alert. That in the treatment of a subject so complicated there should be marked difference of opinion as to the best methods to bring about the desired results is not to be wondered at. That any law, however carefully framed, will require numerous amendments before it is perfect, is also to be expected. Writing on this subject in the *Weekly Medical Review*, Dr. Young H. Bond puts in a strong plea for a "knowledge" rather than a "time" requirement. He says: "Knowledge should be the basis, knowledge the foundation, and knowledge the standard of qualification and excellence.

"Make the two or three-course student pass a satisfactory examination before a competent board, and you settle the question at once upon a basis both rational and just. No school's *ipse dixit* is taken; all submit to a fair and impartial test. Under this system a student who is a good chemist, on account of his academic education, need not worry through two or three years of reiteration of

what he already knows, and the capable druggist will be saved much time that otherwise he would squander in listening to lectures, useless to him. Equally would there be given to a nurse of experience or to one who had much to do with invalids, the opportunity of deriving whatever benefits he deserves, and not to be hampered by a time requirement, the same for tyros and for more experienced students.

“To say that every medical student shall attend for three years a medical college is to minimize the difference which exists between intellects, and to deprive many a competent man from enjoying, on account of a few paltry dollars, the fruits of his industry and knowledge, thus defeating the purpose and sense of all law.”

He presents the following objections to a three-course requirement :

1. It possesses an erroneous basis, viz.: the standard of time and not of knowledge.

2. It is unfair in that it takes no cognizance of the superior intellectuality and industry of students.

3. It allows no credit for previous work and study, no matter how extensive, unless pursued regularly in a recognized medical school.

4. It is unjust because it works a hardship upon deserving young men who happen to be poor in worldly goods; the rich are thus given the advantage and preference.

5. It perhaps would encourage laxness of teachers and indifference of students.

6. The ends would not be accomplished, because second class colleges would exist under its enforcement just as well as now, and they would be equally well patronized.

Opposed to this he places the following advantages to be derived from leaving the entire matter to an examining board :

1. It possesses a just and rational basis, that of knowledge.

2. Every student would perforce depend upon his own efforts and zeal, and would not be indifferent of his studies unless he was not anxious to practice.

3. It is impartial, the rich have no advantage over the poor.

4. The licensing power being taken away from the medical colleges, their instruction, by the sheer force of competition, would be the drawing card; for students would go where they could learn most, rather than where they could most easily graduate.

5. Second class colleges (and by this I mean those characterized by loose management and incompetent instruction) would be forced

out of existence, because so many of their graduates would be rejected by the various State boards.

Should his views prevail so as to shape legislation in that direction, he thinks the following results would obtain :

1. An ever-increasing number of good, competent and worthy doctors.
2. An ever-decreasing number of unworthy, unprofessional and incompetent physicians.
3. Medical colleges upon a higher, better and more intelligent plane.



### THE SENSATIONALISM OF THE LAY PRESS.

We have often wondered how many of the sensational medical stories which are published in the lay press almost daily have any foundation in reality, and it has occurred to us that if the medical press would hunt up the true facts in these cases and publish them, much good could be accomplished toward educating the people to disbelieve these sensational reports unless corroborated by medical testimony, provided of course that the professional readers would act as transmitters of the facts to their clients.

The following clipping recently appeared in a prominent metropolitan newspaper :

#### “REVIVED BY A POST MORTEM.

“ONLY FOR THE SURGEON’S KNIFE ELLET MIGHT HAVE BEEN BURIED ALIVE.

“William P. Ellet, son of H. M. Ellet, who lives near Branchville, Sussex County, N. J., was bitten by a rattlesnake some days ago, and to all appearances died.

“Preparations for his funeral were duly made, but the doctors concluded to hold a post mortem, and they cut open a sore that had formed under his arm. To their great surprise, the young man began to show unmistakable signs of life, and restoratives being applied, he came to and is now getting well.

“The case has attracted widespread attention, and hundreds of people have flocked to see the person who had such a narrow escape from being buried alive.”

Believing that this case belonged to the category of sensational stories, we wrote to a well-known physician of Branchville, sending him the newspaper report and asking him to investigate it, and communicate to us the facts. He writes as follows :

"Ellet was bitten, but is recovering. The enclosed clipping has no foundation in fact. There was no post mortem, but he was in a critical condition for four days."

That a similar result would follow the investigation of other "snake" stories, and premature burials we have no doubt.

There seems to be foundation for the statement that some of the medical sensationalism of the press is chargeable to the medical profession itself. In discussing this subject recently, Dr. George F. Shrady said that he had come to the conclusion that there were two ways of medical interviewing in the daily press: a proper one and an improper one. The proper one was for the individual to speak for his profession, to sink the *ego* entirely out of sight and be proud to be spokesman for his brethren to the public. If that plan were carried out, he believed we need never be ashamed of any interview which appeared in the daily press. The improper way was to magnify the *ego*, by placing the profession in the background and making it appear that by some special skill of our own we were superior to our associates, thereby creating invidious distinctions. If every one who was interviewed on a medical subject would aim to place his profession in a properly scientific and dignified position before the public, he should be proud to be its spokesman. It was often for want of manly and out-spoken views on behalf of the profession that legitimate medicine suffered in the eyes of the people, and not infrequently courted the criticism of the secular press. The great trouble had been, however, in using covert means to advertise self by countenancing the reports of surgical operations, special methods of treatment, and the like. There were a great many ways in which this was done which were alike amusing and reprehensible. These modest doctors would say: "Now, Mr. Reporter, I don't want you to mention my name in connection with this business at all. It is derogatory to the dignity of the profession. It will never do. But if you really insist upon it, here is my card. It does no harm to have the name spelled correctly."

He mentioned another instance bearing upon this part of the question. A reporter on one occasion sought to be a contributor to the *Medical Record*, mentioning as a qualification that he was accustomed to report operations for the leading papers, and exhibited a specimen of his work already prepared for one of the dailies. "But," said the editor, "have you been allowed to do this by the principal?" The answer was: "He not only knows it, but corrects my manuscript." Subsequently, in proof of the statement, the revised report was shown and was afterward published.

## DOES BEER-DRINKING CONDUCE TO SOBRIETY?

That beer-drinking conduces to sobriety has been, and is still claimed. It is difficult to see how those who believe this to be a fact can explain the following statistics. The consumption of beer in Germany does not exceed half a pint per diem for the whole population; at the same time Germany is third in the consumption of distilled spirits, and the *Irrenfreund* is authority for the statement that drunkenness is becoming alarmingly prevalent in that country. In the year 1888, 516 men were admitted to the Vienna insane asylum. The insanity of 143 of these was directly and of 93 indirectly due to alcoholism.

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 THE COLLEGE OF PHARMACY OF THE CITY OF  
BROOKLYN.
 

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We extend a very hearty welcome to this new enterprise, and wish for it a most successful career. Dr. R. G. Eccles, the Dean of its Faculty, writes us that the college was organized "to make pharmacists, and not, as other colleges of the same kind have practically done, engineers and botanists. The students will be compelled from the very start to analyze drugs, identify them and determine their quality; be taught the meaning of each step when taking it, and not weeks after, make pharmaceutical preparations, compound *bona fide* prescriptions; be shown how to put the ingredients together, and told why a certain order should be followed in compounding and acquire, by *actual practice*, the manual dexterity of genuine pharmacists. Every non-essential will be as rigidly excluded as Sanscrit. This means that as much time and pains will be spent in teaching them facts they can use as is now spent elsewhere in teaching things they cannot use."

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 PROCEEDINGS OF SOCIETIES.
 

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## MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society's rooms, 356 Bridge Street, Tuesday evening, September 15, 1891, at 8 o'clock.

Dr. West in the chair.

There were about one hundred members present.

The minutes of the June meeting were read and approved.



The Council reported favorably upon the applications of the following gentlemen, and recommended that they be elected to membership: Drs. James Madison Horton, Sylvester J. Byrne, and Henry Noss.

Acting under the suggestion of the legal adviser of the Society, that it was unwise to admit to membership in the Society practitioners living outside of Kings County, the Council reported that applicants living outside of Kings County were ineligible for membership.

The report of Council on these matters was approved.

#### ELECTION OF NEW MEMBERS.

The chair stated that owing to the intervention of the summer months, at the June meeting the By-Laws were suspended and the applicants for membership favorably reported upon by Council at that meeting were then and there elected, instead of lying over until this meeting.

#### APPLICATIONS FOR MEMBERSHIP.

The following applications were presented:

Dr. Joseph A. Livingston, 127 Wyona Street, L. I. C. H., 1890; proposed by Dr. Geo. E. Law; Dr. W. M. Hutchinson. Alfred Gostales, 518 Evergreen Avenue, Bellevue Hosp. Med. Coll., 1878; proposed by Dr. Peter Scott; Dr. B. F. M. Blake. Wm. L. Hunter, 462 Adelphi Street, University of Buffalo, 1890; proposed by Committee on New Members. James Byers Warden, 254 Carlton Avenue, Coll. P. and S., New York, 1891; proposed by the Committee on New Members. John O. Polak, Long Island College Hospital, L. I. C. H., 1891; proposed by Dr. Frank E. West; Dr. Chas. N. Cox. Frank E. Milbury, 434 Jefferson Avenue; proposed by Dr. E. A. Day; Dr. Saml. P. Casey.

#### SCIENTIFIC BUSINESS.

Dr. Geo. A. Evans presented the first paper of the evening, entitled "Notes on Respiratory Therapeutics," which was discussed by Drs. Eccles, Mosher, and Dr. Aulde, of Philadelphia.

"Early Operation in the Treatment of Tumors" was the title of a paper by Dr. J. S. Wight, which was discussed by Drs. Emory, Jones, Evans, and Bartley.

The last paper of the evening, entitled "Cannabis Indica as an Anodyne and Hypnotic," by Dr. J. B. Mattison, was read, and discussed by Drs. Wight, Eccles, Hunt, Evans, West, Shaw, and Dr. Aulde, of Philadelphia.

## NEW BUSINESS.

The chair stated that the election of two members to the Board of Pharmacy, County of Kings, was in order.

The following nominations were made: Drs. Bartley, Hutchinson, and Lucas.

A vote being taken by ballot, Drs. Bartley and Hutchinson were declared elected.

There being no further business, on motion, the meeting adjourned.

W. M. HUTCHINSON,  
*Secretary.*

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BROOKLYN PATHOLOGICAL SOCIETY.

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The following letter has been sent to the members of the Society:

DEAR DOCTOR:—At the last meeting of the Brooklyn Pathological Society, the Executive Committee presented a plan for systematizing the study of pathology, hoping to interest the profession of the city in our meetings.

It was proposed at that meeting to issue a circular containing a list of subjects to be discussed, so arranged as to have the special subject under consideration fall in the month during which there would be the greatest prevalence of cases coming under that head, to send such circular to each member of the Society and to every regular physician in Brooklyn.

It is the desire of the committee that the members volunteer to prepare papers on each subject, giving their names for publication on the announcement card for the evening,—and that all shall take a little time to read up the subject and come prepared to enter into the discussion of the papers.

It is proposed to devote only two-thirds of the time of each meeting to this work, leaving the remainder of the evening for the presentation of miscellaneous specimens which may fortunately fall into the hands of the members during the preceding month.

In order to accomplish this, three things are necessary:

- 1st. The hearty co-operation of all the members of the Society.
- 2d. Promptness in attendance.
- 3d. A sharp lookout by the members for specimens.

The following classification of subjects has been prepared with the view of accomplishing the object stated in the circular:

1891.	
October 8th.	Pathology of the Digestive System.
November 12th.	“ “ “ Nervous “
December 10th.	Tumors.
1892.	
January 14th.	Pathology of the Respiratory System.
February 11th.	“ “ “ Circulatory “
March 10th.	“ “ “ Osseous “
April 14th.	“ “ “ Lymphatic “
May 12th.	“ “ “ Muscular “
June 9th.	“ “ “ Excretory “

We appeal to you personally to help us make this a success.

Yours respectfully,

EZRA H. WILSON, M.D.,

FREDERIC J. SHOOP, M.D., *Secretary.*

*President.*

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## PROGRESS IN MEDICINE.

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### SURGERY.

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BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

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#### UPON WOUND STERILIZATION.

Seydel (*Münchener med. Wochenschrift*, 1890, No. 47). The author brings forward an argument for the employment of a strictly aseptic or so-called sterilization method in the management of operation wounds. The bandage material is exposed for half an hour in a special apparatus to steam at 120° C. After being used, these may be again sterilized by washing in flowing water, and afterward boiled in a strong solution of potash or soda, with soap, for thirty minutes. S. asserts that the bandage material may be made to bear four repetitions of the above process.

For the operation itself the hands are cleansed and purified after Fürbunger's method; the operation field is disinfected by means of soap and scrubbing, after which it is rinsed with absolute alcohol. The wound is irrigated with five per cent. salt solution.

In fresh wounds excellent results are obtained; suppurating wounds likewise show at once improvement, the secretion, according to S., becoming more markedly diminished than when antiseptics are employed.

## ANTISEPSIS AND ASEPSIS IN SURGERY.

Terrier (*Revue de Chir.*, 1890, No. 10). T. employs a mixed procedure in wound treatment. In case of fresh wounds the aseptic method is, in the main, relied upon; while in the case of suppurating wounds, antiseptics is resorted to. The method advocated by T. has been in use among progressive surgeons for several years, particularly in Germany and France. In England, and even in America, there is still a decided tendency among surgeons to court the necessity for the pound of cure rather than avail themselves of the ounce of prevention. T.'s communication, therefore, is worthy of careful study, although his methods are still susceptible of improvement in several important particulars. The following are the details of his method of procedure: The hands of the operator and assistants, the field of operation, ligature and suture material (silk) are rendered antiseptic by means of sublimate solution, 1.5-1000. Silk is boiled in sublimate solution before each time of using, and in consequence of the destructive effect upon the material of repeated boiling, requires frequent renewal. The method of disinfecting the hands is nearly identical with that employed by Mikulicz. Instruments, except those having a sharp edge, are sterilized by means of dry heat; compresses, etc., are treated in the same manner. As an irrigating fluid, T. employs simply water which has been filtered and boiled.

It occasionally occurs in the course of an operation that a focus of infection is unexpectedly encountered. In such an emergency T. at once proceeds to an energetic application of an antiseptic régime. The parts are at once subjected to a five per cent. carbolic solution, or a ten per cent. chloride of zinc application.

Sea sponges are still employed by T., although more than usual care is taken in their preparation.

## OPERATIVE ASEPSIS.

E. Kummer (*Revue méd. de la Suisse romande*, 1890, No. 10; *Centralblatt f. Chirurgie*, 1891, No. 15). Experience shows that the contact of antiseptic substances with fresh wound surfaces leads to more or less destruction of the tissues. Basing his practice upon the fact that of the many disinfectant methods brought forward by the bacteriologists, heat is by far the most efficient, the author employs this almost exclusively. Of the dry and moist heat methods he prefers the latter. The usually employed forms are boiling water, free steam, and steam under pressure. According to Davidsohn, boiling water will destroy anthrax spores in two

minutes, and instruments profusely infected with pus and cultures of different kinds are sterilized in five minutes. Steam and boiling water, at the same temperature, equally effective. The method by simple boiling water is employed by K. more extensively than any other. The bandage material (gauze tampons replacing sponges), silk and instruments are placed for ten minutes in boiling water. The instruments are kept during the operation in a weak carbolic acid solution; needles and cutting instruments, in order to protect their edges, are dipped in the course of the operation in alcohol. When drainage is necessary, glass drains are employed, dipped in hot water. Hands and operation field are disinfected by sublimate solution and boiled water.

According to Tavel, a 0.6 per cent. solution of salt at a boiling temperature will destroy spores in five minutes, which require a two hours' exposure in common boiling water for their destruction. Therefore K. now employs, instead of boiling water, a 0.6 per cent. solution of salt at a boiling temperature. For instruments which suffer injury when exposed to this solution simply boiling water is used. For irrigation of the wound a warm salt solution is used. For infected wounds the antiseptic methods heretofore in use are still employed.

#### ON LYSOL.

Val. Gerlach (*Zeitschrift f. Hygiene*, 1891, Bd. x.). G. arrives at the following conclusions regarding this agent:

1. Lysol is more effective than either carbolic acid or creolin; not only in pure cultures, but in mixtures of bacteria its power is manifest.
2. Disinfection of the hands may be accomplished without soap, by simple immersion in a 1-100 solution of lysol.
3. For use in disinfecting sputa, stools, etc., it is superior to all other agents.
4. Walls may be freed from germs by spraying with a 3-100 solution.
5. As compared with other powerful antiseptic agents lysol is by far the least dangerous in use.

#### RADICAL CURE OF HERNIA.

Magnai (*Riforma med.*, 1891, April 22). M. proposes a modification of the operation of Bassini and Potemski. Acting upon a suggestion of Tillaux that direct inguinal hernia does not arise as easily as the oblique variety, after separating the different aponeurotic and muscular layers of the inguinal canal, he gives the spermatic cord an inclination at right angles to the plane of the abdominal wall, presumably closing in the inguinal canal and lodging the cord, as in the operation devised by the two first-named sur-

geons, at some point of the anterior surface of the external oblique muscle.

AN ANGULAR SPLINT FOR FRACTURE OF THE THIGH IN CHILDREN.

Prof. Theo. Kölliker, Leipsic (*Centralblatt f. Chirurgie*, No. 32, 1891). K. calls attention to the exceedingly unsatisfactory course of fractured thigh in young children. The position of vertical extension has many advantages over the use of fixed dressings, but cannot always be employed. He recommends the use of an external angular splint, in those cases in which there exists a strongly marked tendency of the proximal fragment to become flexed, and in which flexion it is very difficult or impossible to completely overcome. It extends from the edge of the ilium to a point somewhat below the knee-joint, the pelvic portion representing two-fifths and the thigh portion three-fifths of the entire length of the splint; these meet at an angle of about 135 deg. By means of this splint the extremity is fixed in a position of flexion toward the pelvis, and is supported, as the child is lying, by a wedge-shaped cushion.

LINEAR ELECTROLYSIS OF STRICTURE OF THE URETHRA.

J. A. Fort (*Internat. Centralblatt f. d. Physiol. u. Pathol. des Harn. u. Sexual-Organ*, vol. iii.). An instrument somewhat similar to the *Maisonneuve* urethrotome is employed for purposes of dilatation. The blade, however, is replaced by a blunt plate of platinum which is connected to a *Gaiffe* battery of about ten cells, and used as a negative pole. The positive electrode is placed at some indifferent spot on the thigh. The circuit is closed from one to three minutes, the parts being placed upon the stretch and the platinum blade held against the stricture. The pain during the operation is said to be trifling, and as a rule no bleeding or urethral fever follows. Even in strictures which will only admit the instrument, after the procedure a No. 18 or 19 (F.) can be introduced.

This method was exhibited in the section for surgery at the last International Congress.

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OBSTETRICS.

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BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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ORIGIN OF PERITONEAL ADHESIONS AFTER LAPAROTOMY.

Hermann Thompson (*Centralb. f. Gyn.*, No. 5, 1891). This question has been the subject of investigation by animal experi-

ments at the hands of various observers notably Saenger, De boski, Kelterhorn, Waldemeyer and the author. Different conclusions have been reached by different investigators. Foreign bodies, ligatures, cicatrices, have been accused by some, while peritoneal wounds, irritating and antiseptic fluids, iodoform and blood coagulation have been disputed as causes of adhesion.

Küstner showed in a single case that no adhesion occurred after searing the surfaces with the Paquelin cautery. This observation was confirmed by Kelterhorn.

The author believes with the latter observer that peritoneal adhesions are due to sepsis.

Foreign bodies, ligatures, etc., never give rise to the inflammatory processes on which adhesions depend if not infected. Prevention therefore depends upon complete asepsis. That this is possible in laparotomy has been shown by the bacteriological researches of Rein in operated cases. Failure of absolute sterility most frequently occurs in case of the operator's hands and possibly from the air of the operating-room.

#### NEPHRITIS WITH IMPAIRED VISION IN PREGNANCY.

Dr. Lomer (*Br. Med. Jour. Supplement*, Nov. 8, 1890) reported before the Hamburg Gyn. Soc. two cases of this complication. A primipara, aged 33, suffered for four weeks from œdema and gradually increasing impairment of vision. For twenty-four hours the movements of the child had ceased, and free flooding, with atypical cramp-like pains set in. Dr. Lomer found the patient very anæmic; the pulse could hardly be felt in the œdematous arms, and the patient was almost blind. The uterus was very tense, the os about the size of a florin; the edge of the placenta could be felt within it. The head presented; the foetus was clearly dead. The crampy pains were severe, and accompanied with flooding. Turning was performed under chloroform. It proved difficult, owing to the tenseness of the uterine walls. There were large clots in the uterus. An eight months' dead foetus was removed. The placenta, removed by the hand, was full of white infarcts, and was cupola-shaped in the centre, owing to a large area of hæmorrhage. After the uterus had been thus emptied the pulse could again be felt. The urine coagulated completely on boiling, and contained abundant granular and hyaline casts. The impairment of vision had not entirely gone when the case was reported.

The second case was a multipara in the eighth month of pregnancy. She complained of intense headache, with defective sight.

There was no œdema, but the urine was loaded with albumen, and full of finely granular and hyaline casts. In spite of milk diet and rest in bed, the headache and impairment of sight increased. Dr. L., therefore, induced premature labor. This was done by Schrader's method. The abdomen was fomented for five minutes alternately with hot and with ice-cold water. In two hours pains came on. Six hours later a living child was born. The placenta was healthy. As the uterus was emptied, the headache diminished, but was still bad enough to keep the patient from sleeping for several nights. The albuminuria disappeared on the fifth day after delivery. The defective vision remained longest, and was still marked when the patient left her bed at the end of a fortnight. Dr. Herschel took both patients under his care for their sight. In the first case there was no retinitis. The disturbance was due to uræmia, and paralysis of accommodation, from the extreme general debility, was present. The second was a marked case of retinitis albuminurica. This is very rare in pregnancy. Only three cases have hitherto been observed by Dr. Herschel. The prognosis is altogether more favorable in pregnancy than under other circumstances.

#### PAINLESS AND UNCONSCIOUS PARTURITION.

Professor Tarnier (*Journal des Sages Femmes*, July 10, 1891) describes a case of a woman who came into his wards with a threatening shoulder presentation. M. Chambrelaud rectified the mal-position by external version, and brought down the head, though the membranes had broken half an hour before. A few hours later a child's cries were heard; the midwife in charge inspected the patient and, to the surprise of both, found the child, entirely delivered, between the thighs of the mother. Dr. Tarnier once delivered a woman who would persist in laughing and talking all the time; the child was safely delivered after a few contractions—for they could not be called "pains," as she declared that they caused her no suffering. On another occasion he found a woman actually asleep in his ward, and the child, just born, lay between her legs. Another woman near term came to the hospital because she was alarmed at the rapidity of previous labors. He examined her, and found that labor was in progress. She expressed a desire to have an action of the bowels, but Dr. Tarnier forbade her to leave the room. She rose and tried to go out; he held her back, and the child was suddenly delivered. The expulsion of the child was to the mother simply like passing a motion. Dr. Tarnier once opened a mammary abscess in a farm girl of



herculean strength and proportions. He was asked to attend her during her confinement, and consented. But when sent for, he found her delivered already. She declared that she felt no pain, simply something slipping away. Dr. Tarnier declares that a child can easily be delivered unconsciously into the pan of a water-closet. In such a case the cord will be torn across; a clean cut would afford evidence of a crime. The subject, however, is very difficult from a medico-legal aspect. (Br. Med. Jour., August 15, 1891.)

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## PRACTICE OF MEDICINE.

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BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

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### NOTES ON CASES OF PULMONARY TUBERCULOSIS IN THE WARDS OF ST. PETER'S HOSPITAL.

The diseases in which the patient's position in life has the greatest influence in affecting the prognosis are affections of the heart and lungs. Under the first class of cases this rule affects most strongly the various forms of valvular disease, with the attending hypertrophies and dilatations. It is not uncommon in hospital work to have as patients, at various times during a period of several years, laboring men and women, who become greatly improved by treatment and are able to resume their occupation, returning, however, after a longer or a shorter period, during which time the reserve force of the heart has been quite exhausted. They again improve and resume their work. This may be repeated several times, until finally the cardiac muscular changes become too far advanced to respond to treatment.

Under the second class comes *pulmonary tuberculosis*. These patients do not furnish perfectly similar observations to the heart cases, as their duration is much shorter. Patients, in hospital practice, are sometimes cured, completely and permanently, but the great tendency is to rapid advancement of the disease. Examination of cases, after outside life for some time, which have been discharged improved, will find in a majority of instances that activity of the tubercular process has been resumed. To this the work, the bad hygiene, and the improper food contribute.

It is not uncommon in the examination of chest cases for the question to be asked as to the duration of the disease, or if disease is not yet present, in a person having a direct family history of tuberculosis, as to the time when its invasion will be practically

improbable. The age of the patient and the duration of pulmonary tuberculosis are the two points which offer the most striking differences between the poor and the wealthy classes.

A brief analysis of cases of pulmonary tuberculosis is here presented, being made by clinical observation and from recorded cases, occurring in St. Peter's Hospital in this city.

An extended classification can be made of cases, but the two forms of the disease which personal work has shown to be most common are lesions at the apex, and lesions resulting from constant "Winter cough." In hospital work the Winter cough variety is especially common among married women doing their own housework. These patients have cough during the Winter months for several years, leaving them at first during the Summer, but finally becoming permanent, changes in the lungs being produced which make a suitable soil for the bacillus. Longshoremen engaged in work tending to contract the thorax (as in stooping and lifting) frequently present similar histories. These cases are usually over twenty-five years of age.

Under twenty years the disease is apt to be ushered in by cough, fever and inability to work. Tuberculosis develops in shop-girls in this manner.

It has been of interest to note that domestics when at service are not apt to have consumption, but upon leaving their places, becoming married, and living in houses of their own, there is direct exposure to exciting causes. In the former instance the more perfect surroundings act as a safeguard.

Hæmorrhage from the lungs has not been common in these cases. Mere tingeing has not been called hæmoptysis. This name has been given only when the blood has been free and frothy, in clots, or mixed with mucus. Fifteen per cent. of the males and twelve per cent. of the females had attacks of hæmoptysis.

The following figures relating to four points concerning years and ages are presented :

I.—THE AGE WHEN TAKEN.

Of 111 males :	Up to 10 years there	was	.....	1 case.
	Between 10 and 15	" "	.....	1 "
	" 15 "	20 "	were	.....
	" 20 "	25 "	"	.....
	" 25 "	30 "	"	.....
	" 30 "	35 "	"	.....
	" 35 "	40 "	"	.....
	" 40 "	45 "	"	.....
	" 45 "	50 "	"	.....
	" 50 "	55 "	"	.....
	" 55 "	60 "	"	.....
	" 60 "	65 "	was	.....
				1 case.

*Of 79 females :*

	Up to 10 years there were.....	0 cases.
Between 10 and 15	“ “ “ .....	2 “
“ 15 “ 20	“ “ “ .....	9 “
“ 20 “ 25	“ “ “ .....	17 “
“ 25 “ 30	“ “ “ .....	21 “
“ 30 “ 35	“ “ “ .....	5 “
“ 35 “ 40	“ “ “ .....	12 “
“ 40 “ 45	“ “ “ .....	5 “
“ 45 “ 50	“ “ “ .....	4 “
“ 50 “ 55	“ “ “ .....	3 “
“ 55 “ 60	“ “ “ .....	0 “
“ 60 “ 65	“ “ “ .....	0 “
“ 65 “ 70	“ “ was .....	1 case.

2.—DURATION WHEN FIRST SEEN,

*Of 89 males :*

Of 6 months' duration there were.....	30 cases.
“ 1 year's “ “ “ .....	29 “
“ 18 months' “ “ “ .....	7 “
“ 2 years' “ “ “ .....	14 “
“ 3 “ “ “ “ .....	4 “
“ 4 “ “ “ “ .....	4 “
“ 6 “ “ “ was .....	1 case.

*Of 67 females :*

Of 6 months' duration there were.....	35 cases.
“ 1 year's “ “ “ .....	14 “
“ 18 months' “ “ “ .....	4 “
“ 2 years' “ “ “ .....	9 “
“ 30 months' “ “ “ .....	2 “
“ 3 years' “ “ “ .....	2 “
“ 54 months' “ “ was .....	1 case.

3.—AGE AT DEATH.

*Of 22 males dying :*

Between 15 and 20 years there was.....	1 case.
“ 20 “ 25 “ “ “ .....	1 “
“ 25 “ 30 “ “ were.....	6 cases.
“ 30 “ 35 “ “ “ .....	5 “
“ 35 “ 40 “ “ “ .....	2 “
“ 40 “ 45 “ “ was.....	1 case.
“ 45 “ 50 “ “ “ .....	1 “
“ 50 “ 55 “ “ were.....	2 “
“ 55 “ 60 “ “ “ .....	3 “

*Of 20 females dying :*

Between 15 and 20 years there were.....	4 cases.
“ 20 “ 25 “ “ was .....	1 case.
“ 25 “ 30 “ “ were.....	8 cases.
“ 30 “ 35 “ “ “ .....	0 “
“ 35 “ 40 “ “ was.....	1 case.
“ 40 “ 45 “ “ “ .....	1 “
“ 45 “ 50 “ “ were.....	4 cases.
“ 50 “ 55 “ “ was.....	1 case.

## 4.—DURATION AT TIME OF DEATH.

*Of 22 males dying:*

The shortest duration was 6 months; the longest, 6 years. Under or at 1 year there were 15 cases; and from 18 months up there were 7 cases.

*Of 20 females dying:*

The shortest duration was 2 months; the longest was 20 years.

Under or at 1 year there were 14 cases; and from 18 months up there were 6 cases.

From the above analysis it will be seen that there were more males between 25 and 35 years, and more females between 20 and 30 years; there were few females between 30 and 35, but more females between 35 and 40; nearly twice as many males after 40 as females; more females died under 30; more males died over 30; senile phthisis was more common among men.

In conclusion, the following question already given may be answered: When is a person having a direct family history (one or both parents) free from the invasion of tuberculosis? From the above figures it will be seen that twenty per cent. of the male and fifteen per cent. of the female cases were over forty years of age. Senile phthisis is not an uncommon disease, and these figures with constant observation go to prove that it is not too severe a statement to say that among the laboring classes one with a direct family history is never free from the danger of tuberculosis. This should be of importance in life assurance examinations.



## PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,

Pathologist and Professor of Histology and Pathological Anatomy, Long Island College Hospital  
Associate Director of the Department of Histology and Pathology, Hoagland Laboratory.

## GASTRITIS IN GASTRIC CARCINOMA.

Fischel (*Zeitschr. f. Heilk.*, xii., 1891, S. 317). Fifteen cases of gastric carcinoma were examined for the pathological changes in the mucous membrane. Of these, six were of the pylorus, five of the cardia, three of the small, and one of the great curvature. Changes were found in the superficial epithelium, the interstitial tissue, in the glands of the mucosa, the gland cells, and further in the muscularis mucosæ, the submucosa, the musc. propria, and finally the serosa.

In thirteen cases the superficial epithelium was altered—mostly gone. The interstitial tissue was always inflamed, showing more

or less rich small cell infiltration and new connective-tissue formation. The follicles of the mucosa showed various changes; sometimes alteration of position of the tubules, which coursed diagonally and often parallel to the surface of the membrane; further stenosis of the lumina of the glands, atrophy of the glands, and cystic distention of the same, finally rupture of the glands.

The changes in the glandular epithelia is of such a nature that it is impossible to differentiate the parietal from the chief cells. Also granular degeneration of the epithelia was often observed, as well as transition forms between parietal and chief cells. The musc. mucosæ showed commonly assemblage of numberless small round cells, fibrillar fibres and golden pigment. In other cases it was partly hypertrophic, partly atrophic, partly entirely gone. The submucosa was sometimes thickened, the vascular walls often thickened, and in the end showed endarteritis obliterans.

The musc. propria was either of normal thickness, or too thick, so that atrophy was excluded.

Atrophy was only present in a very few cases. The serosa was essentially unchanged, only in two cases very rich in cells and vessels.

#### RELATION OF STOMACH DIGESTION TO NEPHRITIS.

E. Biernacki (Medical Hospital Clinic, Warsaw; Berl. klin. Wochenschr., 1891, No. 25). Stomach digestion in twenty-five cases of nephritis was estimated. Large white kidney, cirrhotic kidneys, and some cases also of acute nephritis and interstitial nephritis were included in the investigations. Only typical cases were chosen, especially such as had not heretofore suffered with any form of digestive disturbance. Fever, heart and lung complications were also excluded.

In general the experiments proved that in nephritis the secretion of the gastric mucosa is vitiated. This vitiation is exceedingly oscillating.

Hydrochloric acid is in some cases more or less deficient, in other cases wanting altogether. Coinciding with this the total acidity of the stomach was in the rule lessened; but sometimes directly to the contrary. Peptonization (by biuret reaction) always more or less present. The digestive ferments suffer also more or less diminution. Pepsin was, *e. g.*, totally absent in single cases; also labferment and labzymogen. Commonly lactic acid could not be found by Uffelmann's reaction. All these findings were of very oscillating nature, and classified themselves apparently according to the period of the renal inflammation, and

particularly according to the relation of the urine excretion. The intensity and duration of the disease and influence of uræmia also come into consideration.

With oliguria and œdema the change in quantity of H. cl. is more marked than after restored urine excretion and disappearance of œdema.

A clear correlation between the excretion of urine and the quantity of H. cl. in the gastric juice was found to exist in many cases, particularly those of lighter nature. Like relations in regard to the ferments of the gastric mucosa could not be proven. Commonly the pepsin-working was unusually strongly compromised in very light cases. Abnormal fermentation, despite the marked lessening of gastric secretion, was not observed. On the contrary, heightened mechanical activity of the stomach was unusual.

For instance, often three-quarters of an hour after the exhibition of the experimental albumen meal, nothing was found in stomach.

It is supposable, *à priori*, that all these findings are to be attributed to anatomical changes in the gastric mucosa.

The vitiation of the gastric juice during the oliguria is probably through the compromising effect of the piling up in the gastric follicles of the products of retrograde metamorphosis, resulting from inefficiency of the kidneys.

#### SUR LES GRAFFES ET INOCULATION DE CANCER.

V. Cornil (Bull. de l'Acad. de Méd., 1891, No. 25). The two statements of C.'s from a strange surgeon, whose name he suppresses, are as follows:

I. From a woman with advanced tumor of the breast was removed the neoplasm by surgical means. Of this tumor a very small portion was introduced under the skin of the sound breast under absolutely antiseptic precautions. The slight wound of operation healed by primary union. In two months a small nodule appeared at this point, about the size of an almond, with no traces of inflammation.

Both the original growth and the nodule presented the histology of sarcoma fasciculata, and in the small nodule the cells showed in great numbers active karyo-kinesis.

Soon afterward the patient died of acute intercurrent disease, and a most exhaustive autopsy failed to discover any further trace of sarcoma.

II. A similar operation performed on another patient with breast tumor induced the growth in the same way of another nodule. The original growth was a tubular epithelioma; but

the nature of the nodule could not be determined, as patient refused to consent to its removal.

#### A RARE HAIR TUMOR IN THE HUMAN STOMACH.

O. Bollinger (Pathological Institute, München; Münchener med. Wochenschr., 1891, No. 22). A sixteen-year-old maiden suffered for years with gastro-intestinal symptoms, and finally died of inanition. A year before death a hard tumor of the stomach was diagnosed, which was supposed to be a malignant neoplasm. At the autopsy both stomach and duodenum were found to be completely filled with hair. Stomach and duodenum were 55 cm. long, 11 cm. through, and 28 cm. in greatest circumference. Weight of stomach with contents, 1110 gr., of which 900 gr. expressed the weight of the hairy tumor. The tumor was composed of brown and "dark-blond" hairs, whose average length was 16 cm. The gastric walls were exceedingly thin by virtue of the extraordinary dilatation of the organ.

The patient began to pull hair out of her mouth when only four years old.

Of similar cases there are only seven in literature. These were collected by Schönborn. In such animals as dogs, deer, sheep, pigs and horses hair tumors in the stomach are of not very seldom occurrence.

#### DIAGNOSTIC VALUE OF THE MALARIAL PLASMODIA.

Hertel und V. Noorden (Berlin. klin. Wochenschr., 1891, No. 12). The belief in the malarial plasmodium as a disease producer is now very general in Germany. Quincke in confirmation of the simultaneous publications of Plehn and Rosin had also excellent opportunity to point out the unfailing presence and pre-eminent diagnostic worth of the plasmodium in malaria. H. and V. N. report two cases which demonstrate in an extraordinarily instructive manner the diagnostic significance of examinations for the plasmodium.

CASE I. had regularly intermittent fever, splenic tumor and herpes, otherwise negative (—no plasmodia found).

Quinia controlled the fever completely. But because after most careful search no plasmodia malarix could be found, malaria was excluded, in spite of the clinical evidences of the disease. That this was correct was proven by the fact that in a few weeks pulmonary tuberculosis evidenced itself, and was fully developed in a few months.

In strong contrast to this case is Case II., in which positive findings were made in the blood, and because of the presence of

the plasmodia, malarial fever was diagnosed long before the typical temperature curve had developed.

The ease with which the plasmodia are found, both in fresh and stained preparations, and the impossibility of confounding them with any other parasites are remarked by the authors.

[The successful search for the plasmodia depends upon the time and method of procuring the specimens; the blood should be drawn by pricking the ball of the left ring finger either during or just after the chill, or just before the temperature rises and before any quinine has been given.—V. C.]

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## OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

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### THE ORIGIN OF INFLAMMATION AND THE ACTION OF AGENTS EXCITING IT.

(Continued.)

Inoculation of *aspergillus fumigat.* in the anterior chamber was rapidly followed by kerato-iritis, with purulent exudation. The mycelium was, however, not found in this pus, but in the substance of Descemet's membrane and the capsule of the lens.

Injections of *aspergillus fum.* in the vitreous were followed by conjunctival congestion and perhaps swelling. The vitreous showed increasing cloudiness followed by complete suppuration. There was sometimes hypopyon and pupillary exudation. Mycelium and spores could be demonstrated in the vitreous, but not in exudation in the anterior chamber.

Spores of *asp. fum.* injected into the anterior chamber only developed in the non-vascular tissues which bound it, namely, Descemet's membrane and the lens capsule. Here there appeared numerous small areas of mycelium, which caused small points of purulent infiltration in the corresponding deeper layers of the corneal tissue proper, while the remaining cornea showed diffuse infiltration, with fibrinous exudation and marginal vascularization. In the iris they either failed to develop, or did so very imperfectly, but caused, nevertheless, a pronounced iritis, with hypopyon and fibrinous exudation, both in the iris and in the anterior chamber. As a similar form of plastic iritis, but without suppuration, also appears after the injection of spores of *aspergillus nig.*, which do not develop in the eye, the suppuration depends on the more pro-



nounced irritation produced by the mycelium on the lens capsule and Descemet's membrane.

From the appearances above described, two conclusions may be drawn :

1. The fungus development has an action or influence upon parts remote from the seat of that development.

2. There is a difference of action in the area of development (necrosis) and in the surrounding tissue (suppuration).

Two forms of suppuration may be distinguished :

1. The later infiltration at the point of injection occurs from emigration of pus cells from the conjunctival sac at the original seat of irritation.

2. The ring of suppuration surrounding the area of fungus development is due to emigration of leucocytes from the corneal periphery.

This action upon remote tissues (*Fernwirkung*) may be explained by the fact that the fungus in its growth produces certain substances, which are harmful to the organism. These by their solubility and diffusibility extend to the surrounding vascular tissues, and there produce by their action on the blood-vessels hyperæmia, exudation and emigration of white blood-corpuscles. The poisonous action of the substances produced by the fungi is thus a double one, resulting in a local destruction of tissue, when in sufficient strength, and the exciting of inflammation by remote action on the neighboring blood-vessels. In these the vascular wall suffers, muscular paralysis, dilatation and increased permeability resulting.

Exudation occurs and, at first scanty, later more abundant, emigration of leucocytes.

If the injurious substance reaches the vascular tissue, as in injection of aspergillus spores into the anterior chamber, abundant fibrinous exudation follows. The fibrin found in the cornea can only come from the peripheral vessels. The leucocytes collect most abundantly in the vicinity of the fungus. They are drawn to the spot by the action of the moderately concentrated product of the fungus growth, and when close to it are killed by the then stronger solution of the same substance. The development of new vessels always occurs toward the spot of inflammatory irritation.

The fungi grow in the non-vascular portions, in the cornea before the reaction occurs as rapidly as in an artificial medium, in Descemet's membrane, the lens capsule and the vitreous, without hindrance on the side of the tissues, while on the iris the spores

fail to develop. The reaction of the vascular tissues hinders the growth of the fungus, the emigration of leucocytes arrests it.

Within the eye the fungus spores are taken up by the cells (phagocytosis), perhaps after arrest of their development. Mycelium threads, however, were never found enclosed in the cells, but were rather surrounded by them. The inflammatory reaction of the organism perhaps checks the development of the fungus by the removal of its nutriment (oxygen), and also by the strongly alkaline fluid which saturates the tissues. The power of animal fluids to kill bacteria is questionable. The leucocytes certainly cause the solution of such tissues as have been killed by the invasion of the fungus.

II. The inflammatory appearances produced by bacteria correspond in all essential features with those caused by fungi. Corneal injection of solutions of staphylococcus aureus and albus were usually followed in a few days by development of the bacteria and the appearance of thick spindle-shaped figures filled with cocci in the neighborhood of the canal made by the puncturing needle. The purulent inflammation is certainly due to the development of the cocci introduced, and increases only when development of these occurs. In other cases it rapidly subsides. The appearances are similar to those of the aspergillus inflammation. Even while the bacterial development is slight, active conjunctival inflammation occurs with emigration at the corneal periphery and hypopyon. The emigration of pus cells from the conjunctival sac is limited to the corneal surface. The ring of demarcation is small and narrow, corresponding to the slighter extension of the bacterial centre. The hypopyon has been shown by microscopical examination to be free from cocci. It is, however, always coagulated. Cultures from hypopyon, made with all precautions, were negative or resulted in very slight development. The occurrence of hypopyon is due to the entrance of the soluble products of the bacterial development into the anterior chamber, *i. e.*, into a vascular region. Phagocytosis occurs only exceptionally and to a limited degree; according to Hess rather more in the less severe forms.

After injection of the staphylococcus into the vitreous, numerous cocci could be found scattered in the dense purulent infiltration between the pus cells, but no cells contained cocci.

The staphylococcus inflammation has a rather typical course, the height being reached in a few days and the regression following even when the infection has been a more extended one.

The complete destruction of the cocci does not occur, but rather a softening and sloughing of the infected area. Sometimes the centre of this area is already sloughed, while at the periphery the fresh colonies have approached close to the line of demarcation. This is the case in man.

(*To be continued.*)

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## DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

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### THE GIBBES-SHURLEY TREATMENT OF PHTHISIS.

(*Jour. of Laryngology, Aug., 1891.*) This plan of treatment is to saturate the patient's system with a chemical, which will antagonize the formation of those tox-albumoses which result from tissue waste.

The bacillus tuberculosis cannot germinate except in caseous matter, even if it gains access to system.

The experimenters found that chlorine gas, iodine and double salt of gold were most efficacious.

Their mode of procedure is as follows: The air apartment in which treatment is given is saturated with spray of solution of sodium chloride.

Chlorine gas is then generated by adding dilute hydrochloric acid to chlorinated lime. This atmosphere is respired by patient for from two to thirty minutes. Sittings should be one or two each day. In laryngeal phthisis treatment may be given more frequently. Hypodermic injections of iodine, grain one-twelfth to grain one, are given in gluteal region, this alternated with injections of sodium and gold, grain one-twentieth to one-third.

As patient becomes saturated with these chemicals, it is evidenced by increase of temperature, loss of flesh, and diarrhœa.

The tonic effects of treatment will shortly supervene and is manifested by decrease of expectoration, lowering of temperature, diminution of bacilli in sputum, and improvement of physical signs. When subject under treatment shows steady improvement, the quantity of drug is decreased and periods between applications lengthened.

In twenty-seven cases reported, the results were favorable.

## THE HUMAN MOUTH AS A FOCUS OF INFECTION.

W. D. Miller (Jour. Laryngol. and Rhinol.). In this scientific and conclusive article the author discusses the three following phases of the subject:

1. The disease caused by germs propagating in the mouth.
2. Classification of bacteria of the mouth.
3. Prophylactic measures.

First. Decay of the teeth, including such complications as ostitis, periostitis, alveolar abscess and fistula.

*Croupous Pneumonia.*—It is claimed this disease is closely dependent upon the condition of the mouth; its germs are constantly found in the sputum of persons having pneumonia and often in mouths of healthy persons.

The experiments of Hildebrandt demonstrate that these germs are not found in trachea and bronchi of living animals, but are found in mouth, nose, and throat. These should act as an air filter under normal conditions, but passing them the germs are carried by inspired air to broncheoli.

These germs rapidly lose their virulence when outside body, proving that infection takes place from mouth and not from inspired air.

Pneumococcus abscess, stomatitides, thrush, and those affections resulting from absorption of putrefaction through mucous membrane are results of mouth infection.

Under second head author gives a list of twenty-two pathogenic mouth bacteria, which have been isolated.

In experimenting, 111 mice were injected with one or two drops of saliva from human mouth. Seventy-five mice died within five days of acute blood poisoning or peritonitis, and 26 died later from suppurative processes at point of injection, no micro-organisms being found in blood.

In order to estimate the rapidity of action of various antiseptic solutions in rendering saliva sterile, tests were made with following results:

Corrosive sublimate, 1-2000,	required 5 minutes time.
Trichloride of iodine, 1-2000,	“ 1 <sup>1</sup> / <sub>4</sub> “ “
“ “ “ 1-1500,	“ 40 seconds “
Saccharine sat. alc. sol., 1-400,	“ 1 minute “
Thymol, 1-2000,	“ 5 <sup>1</sup> / <sub>2</sub> “ “
Peroxide of hydrogen, 4-100,	“ 6 “ “
Salicylic acid, 1-300,	“ 1 “ “
Benzoic acid, 1-300,	“ 2 “ “

Many other antiseptics were tested, but those mentioned were most effective.

A mouth wash highly recommended is the following :

℞	Acid benzoic,	-	-	-	3.0
	Tinct. eucalypt.,	-	-	-	15.0
	Alcohol abs.,	-	-	-	100.0
	Ol. menth. pip.,	-	-	-	0.75

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## CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

DIPHThERIA : ACUTE DILATATION OF THE HEART, WITH GRANULAR DEGENERATION OF THE HEART-MUSCLE DURING CONVALESCENCE.

Dr. K. Gron (*Norsk Magazin for Laegevidenskaben*, 1887, No. 8; *Archiv f. Kinderheilkunde*, B. 13, p. 152, 1891), reports two cases :

CASE 1.—A girl, twelve years old, had severe (local) diphtheria involving the throat and larynx. She had fully recovered from the local affection and was no longer confined to bed, when, on the fourteenth day, she was taken with continuous vomiting, severe pain in the epigastrium and marked clonic spasms, chiefly in the legs. On the following day she was in collapse: pulse slow and somewhat irregular—30 to 40. The area of heart dulness was considerably increased, the boundaries being: the right border of the sternum, the upper border of the third rib, and one cm. beyond the mammillary line. The heart sounds were indistinct; respiration frequent. The symptoms continued till the next day, with occasional clonic spasms and paroxysms of pain. The pulse rate before death fell to 24. The post-mortem revealed a condition in harmony with the history: the heart was dilated, its weight increased, its muscle pale, and it showed marked granular degeneration.

CASE 2.—A three-year-old female child had diphtheria with severe local symptoms, somnolence and absolute anorexia. She improved decidedly until the fifteenth day, when she had several attacks of vomiting, and soon after collapsed: pulse 70; no dilatation of the heart could be made out; cried constantly till death, which took place fourteen hours after the new turn in her case. Examination showed both ventricles about equally dilated; the

weight of the heart was increased; the heart-muscle was pale, without evident fatty degeneration, but the microscope showed a tolerably distinct granular degeneration.

The author had six other cases with similar clinical histories. He states that post-diphtheritic paresis and paralysis most frequently begin between the twelfth and fourteenth days. Sudden death in the early stages of diphtheria is to be ascribed to suffocation from portions of membrane detached from the larynx. The characteristic symptoms of diphtheritic paralysis of the heart are shown in the histories of the two cases recited. The vomiting and intense abdominal pain, which the author assumes radiate from the heart, may sometimes remind one of an ileus or of exudative peritonitis. Partial spasms are not uncommon; universal spasms, on the contrary, are rare. There is always a slight amount of albumen in the urine. Out of 1,800 cases of diphtheria the author met with 72 cases of heart paresis or paralysis: about 1 in 72, 14 of which were fatal. In well-developed cases the prognosis is always unfavorable.

#### SCARLET FEVER: PROPHYLAXIS AND NATURE OF CONTAGIUM.

Dr. J. H. McCollum (Boston Med. and Surg. Jour., Aug. 6, 1891), writing upon the "Suppression of Infectious Diseases," gives the following quotation from a paper by Drs. W. Allen Jamieson and Alex. Edington, in the "British Medical Journal" of June 11, 1887:

"The method recommended was to disinfect the throat by painting it frequently with a strong solution of boracic acid in glycerine. In dealing with the skin more exact methods were available. These consisted in the employment of warm baths every night from the very first, and in the application to the entire surface of the body, including the head, of an ointment composed of:

Acid carbolic,	-	-	-	gr. xxx.
Thymol,	-	-	-	gr. x.
Vaseline,	-	-	-	dr. i.
Ung. simplicis,	-	-	-	oz. i.

M.

Seven cases were selected; the baths and anointing were persevered in from the second day of the disease till the eighth day of desquamation, the seventeenth or eighteenth of the disease. An ointment for inunction containing carbolic acid in the proportion of one in sixteen had formerly been employed. Now and again slight evidences of absorption of carbolic acid had taken place, and, therefore, in these seven cases, an ointment of only one in

thirty-two was made use of [one-half the strength of the formula given above]. On the eighth day of desquamation one leg was once more carefully anointed, enveloped in a thick layer of sterilized cotton wool, bandaged and covered with a stocking, and allowed to remain undisturbed till the thirtieth day. The wool was then removed by Dr. Edington, with the same precautions as in the other cases, and scales transferred to sterilized tubes for cultivation. It will be seen that the wool was put on at a period of the disease before the bacillus had been obtained from the scales, in cases where no disinfectants had been applied to the skin. This method subjected the procedure, therefore, to a rather severe test. In cultivations of scales from five of the seven cases no bacillus was found. In two it appeared in the cultivating medium; but, whereas, under ordinary circumstances the bacillary pellicle is formed in thirty-six hours, it took six days to develop any evidence of its presence in the jelly. In five, therefore, the powers of reproduction of the bacillus had been checked, by the method adopted, while in the two others a remarkable retardation of the virus had resulted. We submit, therefore, that proof, clinical and experimental, had been furnished that by such simple methods one can neutralize the contagiousness of scarlet fever, so far as that arises from the desquamating flakes of the cuticle."

[I have reproduced this long quotation on account of the important facts it contains. Probably scarlet fever is *spread* most by the dissemination of the flakes of the cuticle, and hence a method that will render them harmless, and at the same time will not have any deleterious effect upon the patient, is of the greatest practical value.—F. H. S.]

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## GYNÆCOLOGY.

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BY WALTER B. CHASE, M. D.

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### INTRA-PELVIC OBSTRUCTION OF THE URETER.

Coe (*Annals Gyn. et Pæd.*, Aug., 1891), after some discussion and a review of nine cases, he makes these deductions:

That the ureter is most exposed to intra-pelvic pressure in the last two inches of its course.

At the base of the broad ligament it is most liable to compression by parametric indurations, and through the bladder wall to pressure from neoplasms in the vesico-uterine pouch and between the uterus and the base of the bladder.

Such occlusion is seldom complete, at least for some time. The portion of the ureter above the point of pressure dilates, eventually affecting the renal pelvis and the glandular part of the kidney.

Cystitis may be present. The symptoms are vague and easily mistaken for those of inflammation of the neck of the bladder.

The urine may be normal, or it occasionally contains a little pus, or an accompanying cystitis may make the true condition.

Early the diagnosis, so far as the ureters are concerned, is not difficult; but the recognition of secondary renal changes is not so easy.

In some cases its presence must be inferred from the condition of the ureter and the diminished daily amount of urine; in others, the presence of albumen, pus and epithelium from the renal pelvis make the diagnosis reasonably sure, while in a few cases the kidney will be markedly enlarged.

The ureter can be felt per vaginam. First find the spine of the ischium; then carry the index finger downward and inward along the anterior vaginal wall toward the median line. The affected ureter is painful to the touch *along its course*, and not at the base of the bladder.

Bozeman recommends catheterization of ureters through an artificial fistula, while other gynæcologists would do nothing. C. advises the cutting down at the point of accessible obstruction, and as far as possible dissecting out obstructing mass.

#### THE TREATMENT OF UTERINE TUMORS.

Werner (Medical News, Aug. 22, 1891) discusses the relative merits of different procedures for the relief of uterine tumors.

Earnest trial has been made with electricity, and it is now time to weigh it in the balance and decide as to its value or harm to the patient.

Many patients have improved under its use, but their general health has been looked after at the same time, and that alone would give a temporary improvement to the local condition in a good proportion of cases.

The hope that electricity was free from danger has proven to be a vain one. Apostoli recognizes this, and warns his disciples against using currents of too high intensity.

A most important point in the treatment of tumors by electricity is a *correct diagnosis*. Keith includes subinvolution, ureteritis and other pelvic inflammations under the head of uterine tumors.

“Changes in tumors are frequently encountered that must be considered. I allude to the suppurative, cystic, œdematous and



sarcomatous varieties, adding to this the fact that the appendages are more often diseased than not, it certainly becomes a matter of most delicate diagnostic skill to make it safe for the patient to undergo treatment by electricity."

Homan reports 24 cases. Profuse hæmorrhage was more or less reduced in 9, unchanged in 6, and made worse in 9. Chadwick reports 11 cases. In no case did the fibroids decrease in size. Inflammation of the uterus and peritonæum was excited in three cases, one of which died. Another died of general septicæmia.

Objections to surgical interference are :

- 1st. Danger to life from operation.
- 2d. Mutilation.
- 3d. Danger of weakness of abdominal walls following.

The shadow of death seems to be no greater from the knife than from the lurking dangers of septic and inflammatory conditions, which only too often follow the use of electricity. Mutilation is hardly more to be dreaded than the uncertainty which must exist after the apparently most favorable results from electrical treatment; and ventral herniæ are not to be feared where care is taken to accurately close the wound and to enclose enough fascia and muscle in the sutures, and to give the patient plenty of rest in bed after the operation.

Monectomy has often been followed by the development of new growths requiring secondary operations.

Tait considers multinodular tumors essentially a disease of menstruation, and advises the removal of the appendages only if possible. In œdematous myoma he advises hysterectomy.

Though the danger from the operation is less in removing the appendages only, still in many cases there will be an after regret that the more radical operation was not resorted to.

Even under the eyes of the most skilful diagnostician mistakes are made, in which it is found that after the removal of the appendages that the tumor still continues to grow and the evil symptoms continue.

An aggregate of 142 hysterectomies are reported by Price, Homans, Mundé, Mann and Byford, with only 20 deaths. Tait reports a mortality of 11.3 per cent., and Price a mortality percentage of only 5.6.

The extra-peritoneal operation has found the most favor, "because of its safety from hæmorrhage, the more rapid and safe convalescence, and if carefully carried out, the danger of septic infection is almost *nil*."

## BACTERIOLOGY.

BY B. MEADE BOLTON, M.D.,

Director of the Department of Bacteriology, Hoagland Laboratory, Brooklyn.

## ON THE STERILIZATION OF MILK FOR CHILDREN.

Dr. W. Hesse (*Zeitschrift f. Hygiene*, Bd. 9, Heft 2) publishes an account of a large number of experiments made to determine the best method of sterilizing milk on a large scale for hospitals, etc. The sterilizing apparatus consisted of an iron boiler, nine inches in diameter, holding about twelve quarts, and a number of sheet-iron cylinders, nine and one-half inches in diameter and about twelve inches high, for the reception of the bottles of milk. These cylinders had a grated bottom, and were covered with felt. These were set one above another in the boiler, and the top one covered with a flat conical cover, which had a small hole in the centre for the escape of the steam. On the upper edge of the boiler and the cylinders was a groove, about three-eighths of an inch broad, filled with water, to support the cylinders or the cover, and also to make a water-tight connection between the different parts. As the inner edge of this groove was lower than the outer, the water which condensed during sterilization ran back into the boiler. The water was heated with gas.

Two sets of experiments were made: 1. Sterilization of milk containing resistant spore-bearing organism, introduced on garden earth and potato peels. 2. Sterilization of milk as obtained from the dairy.

The first set of experiments are more of scientific than practical interest. Hesse found it was impossible to sterilize milk to which garden earth or potato peelings had been added in less than eight hours, and even after ten hours' continuous sterilization some of the milk spoiled.

The second set of experiments led to the following conclusions as rules for insuring sterilization of ordinary cow's milk:

"1. Only the best, well-kept and dry-fed healthy cows furnish good wholesome milk suitable for sterilization and to be used for children.

"2. The milk must be carefully protected from every avoidable uncleanness from the first, in order to prevent contamination with very resisting spores of bacilli.

"3. The milk should be sterilized immediately after it is drawn from the cow, preferably in one-half-quart bottles with patent stop-

pers. If it is impossible to sterilize immediately, it must be kept as cold as possible and sterilized within a few hours after it is milked.

“4. In order to avoid bursting the bottles, unless stone bottles are used, they must either be gradually warmed beforehand or the apparatus must be heated up gradually. The bottles must not be more than four-fifths full. Heating the flasks before introduction into the sterilizer has the advantage that the sterilization is more quickly effected and the original color of the milk remains unchanged. In case my apparatus is used, each bottle must be placed in a separate sheet-tin cylinder (to prevent the milk running down into the boiler if a bottle should break).

“5. The milk must be heated to the boiling point in the sterilizing apparatus. The point of time at which the milk reaches this temperature is to be carefully determined by a thermometer introduced from the outside or by a contact thermometer with alarm. The test of the temperature must be made on a bottle which is in the most unfavorable position, *i. e.*, in my apparatus on a bottle lying in the upper part, and the bottle must be filled with liquid. After the milk has reached the boiling point, it must be subjected to the unweakened stream of steam for one and three-quarter hours. Milk treated in this way is sterilized. It keeps in green or brown bottles a long time, perhaps forever, unchanged. In white bottles it is desirable to protect the milk from the influence of rays of light.”

#### INVESTIGATIONS OF DIPHTHERIA.

Welch and Abbot (Bulletin of the Johns Hopkins-Hospital, vol. ii., No. 11, Feb.-March, 1891), in spite of the convincing results of European observers in examinations of diphtheria, made a series of observations to determine whether the diphtheria in America is also caused by the Klebs-Loeffler bacillus. This investigation was demanded the more because of Prudden's results in examinations of diphtheria here. Loeffler recognizing the thorough competence of Prudden as a bacteriologist, says: “I do not believe that in North America a form of diphtheria prevails different from that with us. With us (in Europe) the bacilli are found regularly by every investigator, there (in America) they are constantly missed. Further investigations must and will clear up this contradiction.”

Welch and Abbott's investigations, made upon eight cases of uncomplicated diphtheria, showed the presence of the Loeffler bacillus in every case, in some cases almost in pure cultures. The identity was proven, not only by comparing cultures, but also by animal experiments. A culture from one case inoculated upon the

trachea of a cat produced a characteristic pseudo-membrane. Guinea-pigs and rabbits were also inoculated, with positive results. The authors explain the apparent contradiction in Prudden's results by the probability that the latter's cases were not diphtheria but anginas, secondary to scarlatina, measles, erysipelas, or developing in a situation, where these diseases prevailed.

In conclusion, the authors say: "We are now in possession of a positive means of diagnosis. . . . We are now in a position to clear up a hitherto confusing and much-disputed chapter in ætiology. The endless controversy as to whether diphtheria is primarily a local or a general disease is settled in favor of the doctrine that it is primarily local, and that the grave constitutional symptoms are the result of intoxication with poisonous products, formed by the local action of the bacilli."



## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the  
Medical Society of the County of Kings.*

THE ACTION, THERAPEUTIC VALUE AND USE OF THE CARLSBAD SPRUDEL SALT (POWDER FORM) AND ITS RELATION TO THE CARLSBAD THERMAL WATER. By Dr. W. Jaworski (Krakow). American Edition. Blakiston, Philadelphia, 1891.

The above work, being one of the most complete and analytical on the subject of Sprudel or Carlsbad salts, will be of great interest and value to the American profession. A short dietary has been added by the translator.

According to the analyses made, the salts contain nine ingredients. These have been obtained by boiling and filtering the Sprudel water, evaporating the residue, and allowing the resulting salt to be acted upon by the  $\text{CO}_2$  of the spring. A white powder is the form finally obtained. The first four ingredients are: sodium sulphate, sodium hydrocarbonate, sodium chloride, and potassium sulphate, present in the proportions of forty-three, thirty-six, sixteen, and three parts in the hundred respectively.

The peculiar action of the drug is thought to be due to the combination resulting, rather than from any one of the nine ingredients.

A series of experiments on thirty-four cases was made, proving that the "movement of the bowels was expedited." We fail to find, however, the record in any of these experiments of marked purgative power.

A movement of the bowels may be expected in about one hour after administration, activity on the patient's part hastening the time of the evacuation. This is preceded by some abdominal "rumbling," occasionally nausea,

and generally the passage of flatus. The first movement is normal. The succeeding ones become soft; sodium sulphate and chloride are found in them. There is no pain or griping.

The time of administering the drug should be in the morning from one to two hours before eating. The dose given was from one to three teaspoonfuls. One teaspoonful may be dissolved in eight ounces of water. In the majority of cases this will have to be repeated in fifteen or twenty minutes, the two doses giving better results than one of double the amount. Warm water hastens the action, but is apt to cause nausea. Three teaspoonfuls may be considered as the maximum dose.

From an examination made of the contents of the stomach from time to time, it was found that the salt disappeared from the organ in about one hour after being taken.

The salt has a direct action on the nature of the gastric juice. Three periods are mentioned: one of latent acidity, one of increase, and one of decrease of acidity. A slight alkalinity first occurs, setting free the gastric juice. In from two to three hours the stomach resumes its usual condition as regards the gastric juice. The action of the salt on the contents of the stomach produces aropy mucus. [It would seem that the author had not laid sufficient stress upon this action. Its importance is hinted at several times. It is our belief that the greater efficacy of a solution of Carlsbad salts over an equal amount of hot or cold water consists solely in the mechanical effect of these mucous masses, which, tenacious and insoluble, are carried through the intestines. The author again and again mentions the presence of mucus in the stools, in which some of the ingredients of the salts may be found. This action has a direct bearing upon giving the salts in catarrhal conditions of the stomach, associated with constipation.]

The digestive power of the gastric juice is at once impaired, but still the time during which its activity is impaired is limited by the presence of the salt in the stomach. With its passage out activity is resumed.

Fifteen minutes after administration the first part of the salt solution enters the duodenum. Stimulation here results, and soon an increased flow of bile occurs. This sometimes enters the stomach and perhaps is one of the causes of the nausea occasionally present.

The following diseases are suggested for the use of the salts: Acid hypersecretion, chronic gastric catarrh, gastric ulcer, gastric dilatation, constipation, intestinal indigestion and catarrh, catarrhal jaundice, gall stones, hepatic cirrhosis (early stages), renal calculus, diabetes mellitus, cystitis, bronchitis.

The author gives a warning against the too long-continued use of the drug in acute diseases of the digestive tract, in ulceration, and in all weakened conditions.

The long-continued use of the salt by altering the digestive power of the stomach impairs nutrition. From four to six weeks' systematic use is an average time for treatment.

The taste of the salt being somewhat unpleasant, the author recommends it being given, when possible, in some aerated water. HENRY CONKLING.

## MISCELLANEOUS.

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### THE COLLEGE OF PHARMACY OF THE CITY OF BROOKLYN.

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The college began its session, October 5th, in its building, 399 Classon Avenue. The following compose its faculty: R. G. Eccles, M.D., Professor of Organic Pharmaco-Diagnosis (Organic Chemistry, Botany, Materia Medica, Microscopy, etc.), and Dean of the Faculty. George C. Dieckman, M.D., Ph.G., Professor of Inorganic Pharmaco-Diagnosis (Inorganic Chemistry, Microscopy, etc.). William P. DeForest, Ph.G., Professor of General Pharmacy (Toxicology, Jurisprudence, Prescription Compounding, etc.). Luther F. Stevens, Ph.G., Professor of Pharmaceutics (Applied Physics, Pharmaceutical Manufacturing, etc.).

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#### ALEX. J. C. SKENE, M.D.

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Alex. J. C. Skene, M.D., has been notified of his election as Corresponding Member of the Société Royale des Sciences Médicales et Naturelles of Brussels. This honor was conferred on the recommendation of a special committee, after a thorough examination of his contributions to medical literature.

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#### BEER VERSUS WINE.

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An investigation was recently made in Munich to ascertain the effects upon the health of excessive beer drinking. The men and women who keep beer places in Munich, as the heaviest beer consumers in the world, were the subjects of such a medical investigation last Spring. The average lifetime of persons in Munich who pass the twentieth year in good health is fifty-three years. The average lifetime for proprietors of beer saloons is 51.35; proprietresses of beer saloons, 51.95; brewers, 42.33. In the same city inquiry has shown that the male proprietors of wine-rooms live but forty-nine years, and women who keep wine-rooms but forty-seven.—*New York Medical Record.*

## VALUE OF THE DIAZO REACTION.

Dr. L. Rüttimeyer, who has made between two and three thousand trials of the so-called diazo reaction of urine from 260 patients, declares his belief that it is a very useful guide both in diagnosis and prognosis, being especially valuable in phthisis and typhoid fever. In phthisis he regards it as denoting absorption of caseous matter, and when it is persistent as implying rapid mischief and an early and fatal termination. In cases of general miliary tuberculosis it was always obtained. The number of typhoid cases which were examined was 1,130, of which 87 were fatal. The presence of the reaction is very constant, and it can generally be obtained early. It does not seem to be present in pyrexial intestinal catarrh. If the reaction is not obtained during the first or second week the case, if one of typhoid at all, must be a very slight one. It cannot, however, be affirmed that a well-marked and constant diazo reaction is any sign of a fatal termination, as with phthisis. The reaction is never given by the urine of healthy persons, and was not observed in hysteria, myelitis, hepatitis, diabetes, cystitis, pyelonephritis, benign ovarian cysts, cholelithiasis with jaundice, gastro-abdominal catarrh with fever, or in a number of surgical diseases. It was occasionally present in cancer of the stomach and œsophagus, chronic nephritis, caries of bone, cold abscesses, pyæmia, scarlatina, pleurisy with serous effusion, tubercular meningitis, and heart diseases. It was more frequently obtained in croupous pneumonia, actinomycosis of the lung, and malignant diseases of the peritonæum. The method of testing is very simple, two special solutions only being required, a concentrated solution of sulphanilic acid in water and a solution of nitrite of sodium of the strength of 1 in 200. The actual test solution is prepared immediately before use by mixing 200 parts of the sulphanilic acid solution with 10 of pure hydrochloric acid and 6 of the nitrite of sodium solution. This mixture is added to an equal volume of the urine, and sufficient ammonia added to render the whole alkaline. A bright or carmine red coloration denotes the diazo reaction. After from twelve to thirty-six hours a deposit occurs, the upper part of which is green or black.—*The Lancet*.

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AMATEUR ANATOMISTS.—Not long since, says a medical contemporary, an officer died at a certain British military station. At an afternoon "at home" of one of the leading ladies on the station, the captain's death was mentioned, and the hostess who "knew

all about it," volunteered the information that he had died of disease of the kidneys, adding with some unctiousness and a little bashfulness, "how thankful we women ought to be that *we* have no kidneys."—*Boston Med. and Surg. Journal*.

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### AN EASY METHOD OF PLUGGING FOR EPISTAXIS.

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Dr. A. A. Philip describes a ready method of plugging the posterior nares, which in his hands is both effectual and easily accomplished.<sup>1</sup> A piece of old, soft, thin cotton, oiled silk, or silk, about six inches square—a piece of an old handkerchief will answer—is taken, and by means of a probe, metal thermometer case, or penholder, is pushed "umbrella" fashion into the nostril, the direction of pressure, when the patient is sitting erect, being backward and slightly downward. It is pushed on until it is felt that the point of the "umbrella" is well into the cavity of the naso-pharynx.

The thermometer case is now pushed on in an upward direction and then toward the sides, so as to push more of the "umbrella" into the pharynx, and is then withdrawn. The closed end of the sac protrudes well into the pharynx, and its open end protrudes at the anterior nares. The inside of the sac may be brushed with some astringent, such as alum or turpentine.

A considerable quantity of cotton wool is pushed well back to the bottom of the sac in the pharynx. Then, the thermometer case being held well against the packed wool, the mouth of the sac is pulled upon, and thus its bottom is drawn forward, and forms a firm, hard plug wedged into the posterior nares. The sac may now be packed full of cotton wool, dry or soaked in some astringent solution. The mouth of the sac is tied just outside the nostril, trimmed with scissors, and the ends of the thread secured outside.

In removing the plug, open the mouth of the sac, and, with small dressing forceps, gently remove the cotton-wool bit by bit. If there is bleeding, simply syringe the sac with weak carbolic lotion or Condry's fluid, and repack with clean cotton-wool. If there is no bleeding when the wool is picked out, gently pull out the sac, or if it be adhering to the mucous membrane of the nostril, apply a little warm water, and it may then easily be removed.

By this method no damage is done to the floor of the nose or back of soft palate by strings, etc., no disagreeable hawking, coughing or vomiting takes place during introduction, and no disagreeable strings are left hanging inside the mouth.

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<sup>1</sup> British Medical Journal, July 18th.



## DEATH FROM ANÆSTHETICS.

In a paper on this subject published in the *Journal of the American Medical Association* of August 15, 1891, Dr. Lawrence Turnbull presents the following conclusions :

“1. During the protracted use of chloroform as an anæsthetic, the blood is changed in character, lowered in pressure, with weakening of the action of the heart and changes in its structure.

“2. Dilatation of the heart occurs under the use of chloroform at all stages, on both sides of the heart, while the heart muscle is weakened.

“3. Cardiac failure occurred before respiration in thirteen instances out of forty-three cases of death from chloroform.

“4. The depressing influence of chloroform on the heart mechanism is not exerted through the vagus nerves, and section of both vagi does not obviate the weakening and dilating influence of chloroform on the heart.

“5. Too many trifling operations are performed under chloroform ; its use should be reserved for those cases in which ether, nitrous oxide, or cocaine will not produce the anæsthesia desired.

“6. Ether death, as a rule, occurs in patients of a certain class, usually from obstructed respiration, and occasionally the heart will stop first, as in two of the four cases in our tables.

“7. Watch both pulse and respiration, both in chloroform and ether ; when the breathing becomes very rapid, danger is near.

“These changes are apt to follow the first act of respiration. Chloroform vapor should not be employed over 4 per cent.”

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OLEOMARGARINE.

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In speaking of oleomargarine, Prof. Charles F. Chandler, of New York, says :

“There is more unceasing and unreasonable opposition to this perfectly healthy and pure product than I know of in any other such direction. Oleomargarine is prepared from beef suet, and it contains precisely the same chemical constituents as butter made from cow's milk ; the only difference is that it is produced by a chemical process entirely, instead of partly by the intermediation of the cow. The strong opposition to oleomargarine is instituted for the most part by the farmers who produce butter, aided by the dealers, who find larger profits from the sale of butter than they possibly could obtain from the handling of oleomargarine. The

people who pretend to find fault with this beef suet product, however, find no fault whatever with precisely the same material in mince-pies or plum-puddings. Some of the State Legislatures have enacted very extreme laws against oleomargarine in deference to the 'farmer vote,' and the General Government has discriminated against it and against our poorer citizens by placing an internal revenue tax upon it—like the tax upon whisky and tobacco—presumably with the idea that its consumption is detrimental, like the too liberal consumption of tobacco and spirituous liquors. Really, it is 'politics' pure and simple that prevents our people from enjoying, at a nominal price, a perfect substitute and equivalent for butter, the high price of which renders the latter an unwarranted extravagance to many. And all for the votes of the farmers and dealers!"

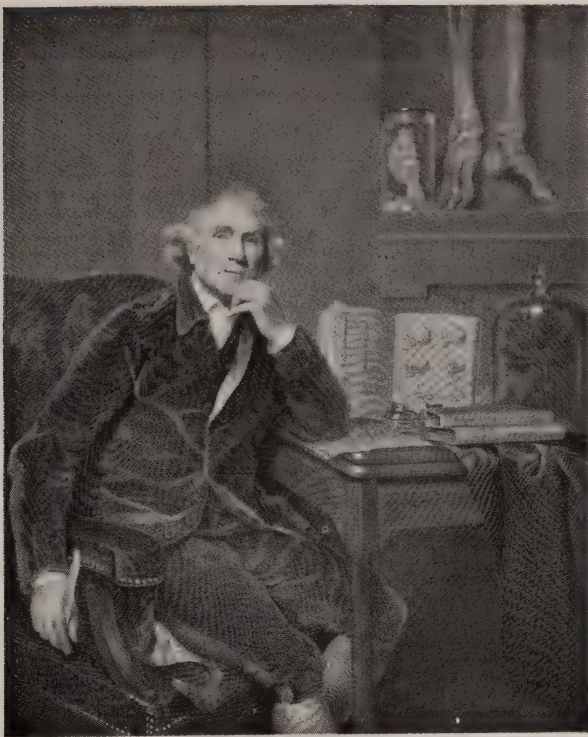
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### THUNDER AND SOUR MILK.

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"The effect of thunder-storms in turning milk sour is a matter of constant observation in every household. It is not certainly known to what element in the air this souring action on milk is to be directly attributed, and most people are content to ascribe it to 'electricity in the air.' An Italian *savant*, Professor G. Tolomei, has lately made some experiments with the view of elucidating this question. He found that the passage of an electric current directly through the milk not only did not hasten, but actually delayed acidulation, milk so treated not becoming sour until from the sixth to the ninth day, whereas milk not so electrified became markedly acid on the third day. When, however, the surface of a quantity of milk was brought close under the two balls of a Holtz machine the milk soon became sour, and this effect he attributes to the ozone generated, for when the discharge was silent the milk soured with greater rapidity than when the discharge was explosive, in the former case more ozone being formed than in the latter. The souring of milk is generally attributed to the growth of a ferment (bacterium), which converts the milk sugar into lactic acid. It is possible, then, that the presence of ozone in the air overlying the milk hastens the growth and multiplication of the bacterium. The first observation—namely, the retardation of souring by the passage of a current through the milk—may be a point of practical importance to milk traders. Any method of preserving milk from its first retrogressive changes, which does not involve the addition of extraneous substances (antiseptics) to the milk, and which is at the same time cheap, effective, and not likely to prove injurious to the consumer, is sure to be welcomed at a time when milk is sent long distances to market, and is often stored for a considerable time before it reaches the consumer."

—*British Medical Journal*.



JOHN HUNTER.

John Hunter was the youngest of ten children, brother to William Hunter, whose portrait is to be found in another part of this journal, and born after his father had attained the age of seventy, on the 14th of February, 1728.

He was preeminently a man of genius—

“One of the few, nature’s interpreters;

The few, whom genius gives as lights to shine.”

A competent authority tells us that “The mind of John Hunter was bold and inventive, treading constantly in a path of its own, without regard to the common track which had been followed by others. This was aided by an industry and enthusiasm of which it would be difficult to find any superior example; with such singular endowments for the cultivation of science, his progress was proportionably great. There is no subject which he had considered where he has not added new light; and there are many which he has very much improved.”

Dr. Denman used to say that “William Hunter was a man of order and John Hunter a man of genius;” and in truth, with all his cleverness, he felt John’s superiority. We find William frequently in his lectures and writings making use of expressions like this: “In this I am only my brother’s interpreter.”—“I am simply the demonstrator of this discovery; it was my brother’s.”

William was the polished orator, the classical writer; John was a poor lecturer, his manner bad, his language embarrassed and inelegant; he scarcely raised his eyes from his book, and it is said that he never gave the first lecture of his course without taking thirty drops of laudanum to take off the effect of his uneasiness.

He had a rough exterior, an irascible disposition, and while he had no command over his temper, he was not wanting in sensibility or kindness of heart. He would see an industrious tradesman before a duke when his house was full of grandees. “You have no time to spare,” he would say; “you live by it, and most of these can wait; they have nothing else to do when they go home.”

No man cared less for the emoluments of the profession, or more for the honor of it; a striking contrast to his penurious brother, to whom he sent a poor man with this note:

“DEAR BROTHER:—The bearer wants your advice. I do not know the nature of the case. He has no money and you have plenty, so you are well met.”

When engaged in investigations with his pupils, he would leave off reluctantly with the remark that “he must go and earn that damned guinea, as he would need it to-morrow.”

Although surgery had been cultivated more than 2,000 years, he did more toward establishing it as a science than any of his predecessors, yet no man felt more the opprobrium upon the art, in the necessity of operation. “To perform an operation,” says he, “is to mutilate a patient we cannot cure.”

In a short article like this, it would be impossible to even catalogue the original work he did, not only in surgery, but also in anatomy and physiology.

His treatise on venereal diseases (of which a manuscript copy is one of the treasures of the writer’s library) and on the blood and inflammations, together with his having been the first to apply the ligature in popliteal aneurism, will require nothing else to keep his memory green for generations to come.

His extensive museum became the property of the Royal College of Surgeons, and is to-day his most conspicuous monument.

The portrait we give this month is from the celebrated one painted by Sir Joshua Reynolds and engraved by that master of the golden age of engraving, William Sharp, and which now graces the office of Prof. Chas. Jewett. The original painting is in the council room of the Royal College of Surgeons.

Mr. Hunter was for a long time a sufferer with angina pectoris, which his irritable temper very much aggravated. He sometimes remarked that his life was at the mercy of anyone who chose to anger him; and so it proved.

On the 16th of October, 1793, he attended a meeting at St. George’s Hospital, and there being irritated by some circumstance, he withdrew from the room into an adjoining apartment and turning round towards one of the physicians, he gave a deep groan and dropped dead.



## BROOKLYN VITAL STATISTICS FOR JUNE, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population estimated, June, 1891,	862,155	The number of births reported was	- - - - - 1111
In the month of June there were	1771	The number of marriages reported was	- - - - - 578
deaths, the rate of mortality being	24.99 per 1000 of population.	The number of still-births reported was	- - - - - 145

The mortality by classes and by certain of the more important diseases was as follows :

*Causes :*

1. Zymotic, - - - -	483	Malarial Diseases, - - - -	10
2. Constitutional, - - - -	206	Diarrhœal Diseases (all ages),	244
3. Local, - - - -	806	“ “ (under 5 years),	228
4. Developmental, - - - -	134	Phthisis, - - - -	160
5. Violence, - - - -	52	Bronchitis, - - - -	69
Measles, - - - -	22	Pneumonia, - - - -	153
Croup, - - - -	27	All Respiratory, - - - -	247
Diphtheria, - - - -	59	Bright's Diseases, - - - -	28
Scarlet Fever, - - - -	40	Puerperal Diseases, - - - -	10
Typhoid Fever, - - - -	6	Old Age, - - - -	29
Whooping-Cough, - - - -	15	Suicide, - - - -	9

*Reported Cases :*

Diphtheria, - - - -	118	Measles, - - - -	302
Scarlet Fever, - - - -	248	Typhoid Fever, - - - -	35

Deaths by sex, color and social condition were as follows :

Male, - - - -	973	Native, - - - -	1276
Female, - - - -	798	Foreign, - - - -	495
White, - - - -	1749	Married, - - - -	411
Colored, - - - -	22	Single, - - - -	1156
Widows, Widowers, and not stated, - - - -	204		

Still-births, excluded from list of deaths, were as follows :

Males, - - - -	75	} Total, - - - -	145
Females, - - - -	70		
Deaths in public institutions, -	133	Homicides, - - - -	2
Deaths in tenement houses, -	723	Suicides, - - - -	9
Inquest cases, - - - -	-		149

*Age Periods :*

Deaths under 1 year, - - - -	576	Total deaths, 5 to 20, - - - -	128
“ “ 5 years, - - - -	327	“ “ 20 to 40, - - - -	239
Total deaths under 5, - - - -	903	“ “ 40 to 60, - - - -	258
		“ “ 60 and upwards, - - - -	243

Certain foreign and American cities show the following death-rate for the month of June :

Brooklyn, - - - -	24.99	Vienna, - - - -	27.24
New York, - - - -	27.74	Paris, - - - -	22.13
Philadelphia, - - - -	19.71	London, - - - -	26.04
Berlin, - - - -	17.26	Glasgow, - - - -	27.46
Dublin, - - - -	-		22.44

## BROOKLYN VITAL STATISTICS FOR JULY, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population, estimated, July, 1891,	862,155	The number of births reported was	1476
In the month of July there were 2316 deaths, the rate of mortality being 31.38 per 1000 of population.		The number of marriages reported was	484
		The number of still-births reported was	143

The mortality by classes and by certain of the more important diseases was as follows :

*Causes :*

1. Zymotic, - - - -	881	Malarial Diseases, - - - -	9
2. Constitutional, - - - -	384	Diarrhœal Diseases (all ages),	685
3. Local, - - - -	854	“ “ (under 5 years),	693
4. Developmental, - - - -	145	Phthisis, - - - -	149
5. Violence, - - - -	52	Bronchitis, - - - -	82
Measles, - - - -	16	Pneumonia, - - - -	36
Croup, - - - -	22	All Respiratory, - - - -	185
Diphtheria, - - - -	48	Bright's Diseases, - - - -	61
Scarlet Fever, - - - -	29	Puerperal Diseases, - - - -	38
Typhoid Fever, - - - -	10	Old Age, - - - -	8
Whooping-Cough, - - - -	8	Suicide, - - - -	2
Cerebro Spinal Meningitis,			10

*Reported Cases :*

Diphtheria, - - - -	91	Measles, - - - -	141
Scarlet Fever, - - - -	160	Typhoid Fever, - - - -	40

Deaths by sex, color and social condition were as follows :

Male, - - - -	1240	Native, - - - -	1852
Female, - - - -	1076	Foreign, - - - -	464
White, - - - -	2275	Married, - - - -	370
Colored, - - - -	41	Single, - - - -	1777
Widows, Widowers, and not stated,			169

Still-births, excluded from list of deaths, were as follows :

Males, - - - -	72	} Total, - - - -	143
Females, - - - -	71		
Deaths in public institutions, -	135	Homicide, - - - -	1
Deaths in tenement houses, -	847	Suicides, - - - -	5
Inquest cases, - - - -			173

*Age Periods :*

Deaths under 1 year, - - - -	1126	Total deaths, 5 to 20, - - - -	140
“ “ 5 years, - - - -	340	“ “ 20 to 40, - - - -	283
Total deaths under 5 years, -	1466	“ “ 40 to 60, - - - -	226
		“ “ 60 and upwards, - - - -	201

Certain foreign and American cities show the following death-rate for the month of July:

Brooklyn, - - - -	31.38	Vienna, - - - -	25.18
New York, - - - -	32.85	Paris, - - - -	20.57
Philadelphia, - - - -	24.18	London, - - - -	19.76
Berlin, - - - -	18.76	Glasgow, - - - -	23.74
Dublin, - - - -			21.98





EDWARD JENNER, M.D., LL.D., F.R.S., ETC., ETC.

“And he stood between the dead and the living; and the plague was stayed.”  
Numbers: xvi., 48.

The immortal discoverer of vaccination. A writer says of him: “Among all the names which ought to be consecrated by the gratitude of mankind, that of Jenner stands pre-eminent. It would be difficult, we are inclined to say impossible, to select from the catalogue of benefactors to human nature, an individual who has contributed so largely to the preservation of life, and to the alleviation of sufferings.”

Had he been a Greek and lived in the age of mythology, the name of Jenner would surely come down to us as one of the demi-gods. But times have changed, and the life of this Englishman was sufficiently prosaic.

He was the son of an English clergyman; born in May, 1749, at Berkeley, a village in the vale of Gloucester, a district celebrated for its dairies. He says of himself: “I have been the only one of a long line of ancestors and relatives who was not educated at Oxford.” And it may be due to that fact that he early cultivated his powers of observation in the study of nature, among his native meadows instead of the classic halls of a university, that his faculties of observation and induction were developed instead of those of erudition and speculation. The other great factor in the development of this man and his great discovery was the fact that he, at the age of twenty-one, became the pupil and assistant of John Hunter, in whose house he resided for two years. This was a fortunate crisis in Jenner's life; the spark of observation was latent in his mind, and Hunter supplied the friendly breath.

The friendship at that time formed continued through the remainder of Hunter's life, and it is noteworthy that the first to describe the pathology of *angina pectoris* as a disease of the coronary arteries was Jenner, whose studies were incited by the sufferings of his honored preceptor from the disease which terminated his life, and whose coronary arteries were found in the condition that Jenner had predicted.

In his earlier days he was somewhat known as a poet, and his poem on the “Signs of Hair” has been frequently reprinted, and shows accurate observation of the phenomena of nature.

As a naturalist he was well known, and a number of his papers had been well received and published in the transactions of the Royal Society.

But we are told that when Jenner attempted to lay the subject of vaccination before the Society the president gave him to understand “that he had already gained some credit by his communications to the Royal Society, and he ought to be cautious and prudent and not risk his reputation by presenting to that learned body anything which appeared so much in variance with established knowledge and withal so incredible.”

His first public communication on the subject was in June, 1798, and entitled: “Inquiry into the Cause and Effects of the Variolæ Vaccinæ.” Although his attention was first directed to the subject when he was a medical student, previous to 1770. His first successful vaccination was made on the 14th of May, 1796, when Jenner inserted lymph taken from the herd of Sarah Holmes, who was infected with cow-pock, into the arms of James Phipps, a healthy boy about eight years of age. On the 1st of July following, the attempt was made to inoculate him with the small-pox virus by introducing the “matter” into his arm, but no effect followed.

We regret that we have not the space to follow the interesting history of the progress of this great discovery, and hope to do so at more length in some future number of the JOURNAL.

Some of the incidents relating to the spread of the discovery and the fame it brought the discoverer after it was accepted by the profession and the people, which was not until the first year of the 19th century, may, however, be interesting.

The court of Spain sent out an expedition in 1803 for the purpose of diffusing cow-pox through all the Spanish possessions in the old and new worlds, which returned in three years, having circumnavigated the globe and succeeded beyond its utmost expectations. We are told how the anniversary of Jenner's birthday, or of the successful vaccination of James Phipps, was for many years celebrated as a feast in Germany; and how the Empress of Russia caused the first child operated upon in her country to receive the name of Vaccinoff, and to be educated at the public expense. He was elected a member of almost all the chief scientific societies on the continent of Europe, the first being that at Gottingen, where he was proposed by the illustrious Blumenbach. Notwithstanding the enmity between France and England, during those turbulent times in Europe, Napoleon frequently granted petitions for the release of Englishmen confined in French prisons when asked by Jenner, saying: “Ah, we can refuse nothing to that name.” Certificates signed by him and given to persons leaving England were universally recognized as passports. In 1813 the University of Oxford conferred on him the degree of M.D. It was believed that this would lead to his election into the College of Physicians, but that learned body decided that he could not be admitted until he had undergone an examination in classics. This Jenner at once refused. “To brush up his classics would,” he said, “be irksome beyond measure. I would not do it for a diadem. That, indeed, would be a bauble. I would not do it for John Hunter's museum.”

(Continued)





## II.

His existence was terminated on the 26th of January, 1823, at the age of seventy-four. The following epitaph is inscribed on his tomb:

“Within this tomb hath found a resting-place  
The great physician of the human race,—  
Immortal *Jenner*!—whose gigantic mind  
Brought life and health to more than half mankind.  
Let rescued infancy his worth proclaim,  
And lisp out blessings on his honored name:  
And radiant beauty drop one grateful tear,  
For beauty's truest friend lies buried here.”

This great discovery of vaccination was not generally accepted without great opposition. Jenner and his system, and all who adopted it, were made by some of his brethren the butt of attacks which equal in extravagance anything we have met with in the history of medicine.

When he persisted in pressing the consideration of the subject at a medical club to which he belonged, he was threatened with expulsion if he continued to harass them with a proposition which they then conceived had no foundation but in popular and idle rumor, and which had become so entirely distasteful to them.

Shortly after the publication of his first paper on the subject he visited London in order to demonstrate his discovery and method of applying it to his professional brethren in the metropolis, and it will scarcely be believed that with all his efforts and those of his friends, he was unable during a period of nearly three months that he continued in the city, to procure one person on whom he could exhibit the vaccine disease. This in the face of the fact that he was not an unknown adventurer, but already well authenticated as a man of accurate scientific attainments. His papers had been read and applauded by the Royal Society of which he was a member. Can we wonder when we consider the bitterness of his disappointment.

Jenner and his followers were denounced as quacks. The safe school of orthodoxy consisted of those who adhered to inoculation, which practice, it will scarcely be credited, was continued at the small-pox hospital to so late a period as January 30, 1822.

One learned writer describes the *Facies Bovilla*, or cow-pox face, as follows: “the face swollen, with the eyes distorted by strabismus; tumefactions or abscesses about the zygoma, orbits of the eye, and cheeks; the nose flattened, the front teariform, and the countenance so changed that people have with much reason given this sort of face the appellation of the ox-face.”

We can mention but a few of the most extraordinary attacks which were made upon vaccination and its promoters, including of course most violent denunciations of its supposed anti-religious tendencies:

A lady complained that since her daughter had been vaccinated she coughed like a cow, and had grown hairy all over her body; and in one country district it was stated that vaccination had been discontinued there, because those who had been inoculated in that manner bellowed like bulls.

Jenner was ridiculed in various publications; squibs and satires were resorted to in order to prejudice the public mind against vaccination.

An anti-vaccination society was formed, which among other means resorted to the issuing of a number of cheap-colored prints caricaturing the subject. The picture above is No. XV. of the series. In another Jenner is pictured riding on a cow. Dr. Moseley, physician to Chelsea Hospital and to the prime minister, was his great opponent. His book has the title “*Lues Bovilla*,” and was prefaced with these sacred words: “Father, forgive them; they know not what they do.” The following lines appeared on the subject:

“Oh, Moseley! thy book nightly phantasies rousing,  
Full oft makes me quake for my heart's dearest treasure;  
For fancy, in dreams, oft presents them all browsing  
On commons, just like little Nebuchadnezzar.  
*There*, nibbling at thistles, stand Jem, Joe, and Mary,  
On their foreheads. O, horrible! crumpled horns bud;  
*There* Tom with his tail, and poor William all hairy,  
Reclined in a corner, are chewing the cud.”

J. H. H.





that a benign tumor may become a malignant one. And then we may suspect that a tumor is benign when its growth is very slow, extending over many years.

In what we have to say there are some preliminary points :

1. The danger of sepsis after operations, even of great magnitude, is no longer an objection. Formerly infection of an enfeebled patient, even in a small operation, might cause death. This has been remedied by the careful practice of antiseptic surgery. In these days the surgeon, as a rule, ought not to have infection and suppuration in the wound after removal of a tumor.

2. It is not our object now to go into the reasons for holding the opinion that tumors at their outset are of a local nature. For the purposes we have in view, we assume that a tumor is of local origin, and that the constitutional conditions which follow are caused by the local disease. We may, however, note that benign growths are no doubt entirely local disturbances. In regard to malignant growths, we may admit that certain disordered conditions of the system may favor the development of the local disease. In this respect it may be that malignant growths are of constitutional origin, but yet they begin locally. And so it would be true that the constitutional conditions would not exist without the local disorder.

3. From the place where the neoplasm begins, from this point as a centre the growth increases in all directions, invading more and more the surrounding tissue. For our present purpose it makes no difference whether we look upon a tumor as an infective disease caused by some special micro-organism, or as a reversion of type in the cell. The formation of new cells in the territory of the neoplasm goes on progressively, no matter what its cause may be, and sometimes the new growth increases to a very large size.

4. It is admitted that there are locations in the body where, on account of important structures, it is impossible to remove a tumor completely. This proposition needs only to be stated to be accepted.

5. Like all things that are born, a neoplasm begins to live, has a life-history, and perishes. In many ways it has the characteristics of a parasite; it is short-lived itself, and tends to cause the death of the person upon whom it subsists.

6. The waste products of a malignant growth are different from those of the cells of the normal tissue; and when they are diffused through the system, the effects are visible in the depressed state of health, evidenced by feebleness and emaciation. These changes

are consequences and not causes. The neoplasm stands first in time.

If tumors are of local origin, if they start from a focus of irritation, if they invade and infect the tissues more and more, if they are not self-limited, if they only cease their work with the death of the patient, if they send out colonies, thus to speak, which find a resting-place in various parts of the body, if the life-history of the parent growth is repeated in each of the new plants, it seems as if we could not object to the following chain of reasoning. In the first place, if we could prevent the beginning of a tumor, if we could keep away the primary irritation altogether, we would then have no patients with tumors. We cannot do this at present; but if the facts are as supposed, it is perfectly clear that the neoplasm, in its earlier stages, ought to be excised in the most thorough manner; for in this way it would certainly be possible to remove every vestige of the cause of irritation; that is, we cut through tissue that is normal and that contains no infecting material; or, we go beyond the focus in the tissue where the cells have taken on a reversion of type; and the effect will be that the connective-tissue cells of the cut surfaces will be normal or will contain no infection, and so will form normal scar-tissue, which will bind the normal parts together, and there will be no recurrence of the neoplasm.

The general conviction of medical men has been that the removal of tumors is good practice. Nor have I known any physician, as distinguished from a surgeon, advocate the non-removal of tumors. In these statements I do not include advanced and entirely hopeless cases of cancer, or extensively diffused cases of sarcoma—cases in which an operation could not be in any sense palliative even; for there are cases in which an operation would inevitably hasten the fatal result. I mean those cases which, according to the best opinion we can form, would be benefited by an operation, such cases as those in which we have known life prolonged by an operation. Let me say that it is a pretty generally received opinion among those who are competent to judge, that the operations which surgeons are accustomed to perform in the removal of tumors have on the average enabled the patients to live longer and with less suffering. Hence our subject is brought to this: Shall we operate on tumors at an early day? Or shall we wait until the breast, for instance, is quite extensively involved?

In this place let me make a statement of the difficulties in the way of the physician, as well as the surgeon, when he is dealing with an incipient case of new growth. I will illustrate: A patient consults her physician in regard to a small "lump" in her breast;

she has noticed it for a few weeks, and it makes her very anxious ; she thinks it is a tumor, but does not wish to be told that it is ; her physician examines her case, and does not wish to alarm her, nor does he wish to seem ignorant of the nature of the "lump;" he is in doubt, and contrives to look very wise : he advises his patient to wait, and deprecates the use of the knife : this pleases his patient and renews her confidence in his professional judgment : then he tells her that he will try to scatter the "lump," and, perhaps, it does scatter its seeds, like the sower on good ground ; it is reasonably certain that he is dealing with a case of incipient cancer. He says it will develop into something in time if "it does not scatter;" it will be time enough to call in a surgeon when the nature of the tumor is fully declared. Now it ought to be impressed upon the mind of every physician that this delay is fatal ; that it is equal to insuring the death of the patient ; that the sole opportunity of saving a valuable life has been thrown away ; that there is no time to be lost in such a case ; that the only hope of saving such a patient is in the complete extirpation of the local disease. How many patients have I seen perish speedily under this dilatory practice !

Some one says : You would not remove an important part in which there exists only a benign growth ? First, the benign growth ought to be removed—a statement which no one can rightly contradict. Second, such an operation does not work any harm ; it removes fear and anxiety from the patient's mind. Third, suppose, after all, we are dealing with a cancer ; then our delay seals the death-warrant of our patient. "We cannot doom her not to die."

What is our experience in regard to the removal of new growths ? It is this. Take all operations, such as we make, and they effect two things. They prolong life ; they make life more comfortable while it lasts. For these reasons alone it is our duty to advise operations, and perform them when patients permit us. Here we must again admit that there are cases on which the surgeon should not operate. The cases for operation are to a considerable extent selected ones.

There is one point that ought to be made here, in order that the question of early operation may be emphasized. In many cases of advanced disease a palliative operation is indicated and ought to be performed for the purpose of making the life of the patient more comfortable. To remove a large offensive mass of new growth—offensive both to the patient and her friends—is not only to be recommended by the surgeon, but ought to be submitted to by the patient.

An early operation would keep the patient from having a large and offensive mass of new growth, or it might cure her altogether. It would give the patient a longer immunity; it would make her life pleasanter; it would render her free from pain and anxiety; and the last days of her life would not bring her so much suffering and distress.

Have we any evidence of a practical kind which goes to prove that early operations should be performed in cases such as those under consideration? The number of competent surgeons who have expressed positive opinions on this point are too numerous to mention. Their opinions in favor of early and thorough operations are of the most decided character. And here we must protest against the indictment of surgeons by thoughtless persons, for wishing to perform operations. There are no kinder men in the world than surgeons, as a class. I speak of this point, in order to give due weight to the statement I have made that surgeons are in favor of early and thorough operations. They are of this mind, because they know from experience that such practice stands before and above every other practice in conferring benefits upon their patients.

In regard to the treatment of new growths, I have made operations at all stages of their development, except when they were in locations where they could not be reached, and when they were so far advanced as to render interference worse than useless. Let me, for the time being, exclude palliative operations—those performed for the immediate comfort of the patient—and then ask the question: What is the result of my experience in regard to the time of operations on new growths? It is our duty to make one qualification: the operation must be as thorough as the structure and conditions will permit. Our answer to this question is “all one way.” Premising the fact that an early operation can always be made more thorough than a late one, it is competent for us to say that in every instance an early operation has not only prolonged life and made it more bearable, but, as is reasonably certain, it has, more than once, extirpated the new growth so completely as to prevent its return.

#### DISCUSSION.

Dr. WIGHT.—Mr. President: I would like to say in this connection that the occasion of making this plea—for it is simply a plea only directed to the one point, an appeal to the profession, not only surgeons but physicians—for the benefit and advantage of early operations, is because I have seen a great many valuable

lives that might have been saved in this city, go down because of that lack—I will not characterize it, for if I begin to do so I may say words that I would wish I had not said. But it is cruel in the extreme, to my mind.

I am just as much satisfied, and I am ready to substantiate the statement I make here and now, that malignant disease is in many cases as curable as some other disease; and I am just as sure that I have cured some cases of cancer of the breast by early and complete operations, as I am that some of you have cured other severe and serious diseases. But the operation must be done early. Who would think of curing cholera in the stage of collapse, or who would attempt to cure cancer in the *last* stage?

In regard to therapeutics in this direction, I believe we are making some very important progress; but that was not my object in taking up the subject.

Dr. EMERY.—I would like to ask if the author of the paper advises the removal of any lump in the breast, or the removal of the whole breast in any case?

Dr. WIGHT.—I would answer that question in this way: I would advise the removal of the whole breast, for the reason that some of the benign growths become malignant. Suppose a very extreme case, as I admitted in my paper—the surgeon would not be able to make the diagnosis of malignant growth; and if there is a mistake, not only the surgeon, but the patient ought to have the benefit of the doubt. Now I cannot make an accurate diagnosis always. I know some men never make mistakes. I happen to be fortunately not of that kind. I might say it was malignant when it was not; but you see if it was malignant my patient would die; but if I removed the breast and it proved to be a benign growth, I only remove a breast and not a life. It seems to me that solves the question. I would hardly think of mistaking an abscess for a cancer. The great majority of growths in the breast are malignant—that is in my experience; and if a mistake must be made, let us sacrifice a human breast instead of a human life.

Dr. JONES.—I heartily agree with the views expressed by the reader of the paper in regard to the undoubted importance of an early operation in cases of malignant as well as benign tumors.

In addition to the arguments that have been adduced by the author of the paper in favor of an early operation, there is still another to which he has not alluded, namely, the favorable influence which the operation itself, not infrequently, has upon the mind and constitution of the patient. The local shock, as it were, disturbs the existing equilibrium, which disturbance is promptly



followed by a corresponding reaction, in which the vitality of the tissue is raised sufficiently high to determine a return to the normal state.

A paper was recently read before the surgical section of the New York Academy of Medicine by J. W. White, of Philadelphia, on the "Supposed Curative Effects of Operation *per se*," which from the great number of authorities quoted and the peculiarly rich experience of the author formed an address of unusual interest and importance. The author had noticed that in a number of cases of trephining for traumatic epilepsy, where nothing abnormal was found, the patients were notably improved by the operation, in two cases even to the point of cure, and in others the results were strikingly favorable.

In these cases the operation seemed to be *per se* the main factor in effecting a cure. He also instances the experience of Tait, who has more than once drawn attention to astonishing disappearance of tumors, often of a large size, after a mere exploratory incision. In regard to the psychical influence of an operation, the author believes that powerful impressions acting upon the emotional or intellectual nature may so powerfully affect the organic processes of secretion, nutrition, etc., as to arrest the pathological changes and bring about reparative or recuperative action.

These facts while not bearing directly upon the question of early operations for tumors, yet show that there may be other and important considerations in favor of an early operation in any given case, which we at first would hardly expect.

Dr. EVANS.—I am able in a roundabout way to add my testimony to the advantage of the early removal of tumors. A lady who became at one time a patient of mine because of the development of pulmonary tuberculosis, had been seen, some three years before, by Dr. Fowler. Several of the cervical glands of the neck were enlarged, and he informed her that they were tuberculous, and should be removed at once. She decided, however, not to have them out in deference to the advice of another physician whom she consulted. They gradually disappeared, and Dr. Fowler's advice was in a rather bad aspect. However, two years later she developed pulmonary tuberculosis.

I mention this simply to show how the surgeon's advice is often disregarded, and how sometimes the sequel at first would seem to show the surgeon's advice to be bad, but where the ultimate sequel would show that advice to be correct.

Dr. BARTLEY.—*Apropos* of the remarks of Dr. Evans, I would like to ask the opinion of the Society, or any one who can give an

opinion, as to whether the removal of those glands would have prevented the development of tuberculosis. I have a case under treatment where there are some glands of that nature, and the question is whether removing them now would prevent the young woman dying of tuberculosis one of these days. If so, I would like to send for Dr. Wight to remove them.

Dr. EVANS.—As far as my experience goes I would say this: that the tubercle in any part of the body eventually by caseation forms a good culture medium for the germ of the disease and would very readily favor auto-inoculation of other tissues. Pulmonary phthisis first affects the apex of the lung, the rest of the lung becoming affected by auto-inoculation. I do not see why other parts of the body should not become affected from a diseased gland by auto-inoculation through the lymphatics.

Dr. WIGHT.—I will simply fortify the gentleman in his position in a general way. Four years ago a servant was brought to me with a large growth on one side of the neck. I was under the impression it was an adeno-sarcoma, and accordingly I removed it. I went down upon the lung, laid bare the pleura, subclavian, external and internal carotid, and went down to the cervical plexus, and succeeded in extirpating the whole mass, which turned out to be of tubercular origin, so I reversed my original diagnosis by the aid of the pathologist. Now I do not suppose for one minute if I had left that until the lung had become infected my patient would have recovered. It would be very wrong indeed for me to leave that to infect and kill my patient. I believe that explains the whole matter. If a man has left his patient until he is thoroughly infected all through, he cannot doom such a patient not to die.

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#### NOTE ON ANÆSTHESIA AND HEART DISEASE IN LABOR.

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There are certain questions relating to obstetrics which appeal to the medical rather than the surgical side of the professional mind. One of these pertains to the use of anæsthetics, during or immediately after the third stage of labor.

Immediate repair of perineal lacerations, if not of cervical tears, is certainly advisable, according to the experience of those who

keep abreast of the times. There is much variety in these perineal lesions and in their vaginal extensions. It is a comparatively easy undertaking to insert a few sutures which will bring together the skin and mucous membrane, producing a fair-seeming but fallacious perineum. It is not easy to accurately appose sundered muscular structures and to follow up and close vaginal tears so as to obliterate pockets which might otherwise form foci and entrance points of septic material. Such work as this certainly requires for its successful accomplishment the most favorable circumstances. Quietude on the part of the patient, absence of undue haste on the part of the operator are eminently desirable. Given a patient who has been suffering pain for many hours, given also a practitioner who is reluctant to inflict further suffering, the result is apt to be a hurried and incomplete operation.

It is difficult to accept the dictum of most systematic writers that the soft parts involved are so benumbed by foetal pressure that they are anæsthetic to a marked degree, and that suturing causes comparatively little pain. Experience teaches the contrary, and it is difficult to place sutures where they should be in a patient who flinches at the touch of the needle point.

The use of cocaine by absorption, or by hypodermic, is not satisfactory. Its anæsthetic action soon passes off, owing to its rapid diffusion, being unconfined, and its entrance into the circulation is apt to produce a loquacious, agitated and pseudo-hysterical patient.

Ether is open to the objection that many primary perineorrhaphies have to be done by artificial light, and the danger of explosion is to be considered, as well as the more elaborate apparatus required for its administration.

Is there any reason why the chloroform anæsthesia of the second stage cannot be continued into the third stage, thus allowing the necessary operative work to be done accurately and well while waiting for the placenta to separate.

Most writers state that the relative safety of chloroform ceases with the expulsion of the foetus. This judgment appears to be founded on the possible danger of the occurrence of syncope, due to the sudden lessening of abdominal pressure and the consequent over-filling of the veins of the abdomen, thus greatly reducing the supply of blood to the brain and medulla.

It is permissible to inquire if this is a highly probable danger. In alluding to its probability the occasional supervention of syncope during or after paracentesis abdominis is quoted. This appears to be hardly a fair comparison. In removing peritoneal

effusions of large amount, the patient is frequently in a sitting position, thus favoring syncope. In labor, the patient is recumbent, with the head low.

If this reasoning from analogy is permissible, the removal of the fluid from large ovarian tumors should be the signal for the withdrawal of the anæsthetic, whereas it is but one of the early steps of the operation. The coexistence of ovarian cystoma and peritoneal effusions is not rare.

Furthermore there is possibly some difference in the degree and extent of abdominal pressure between pregnancy and hydrops abdominis. In pregnancy a solid and a fluid are contained in a strong muscular sac—the uterus. The pressure endured by the abdominal veins cannot be so uniformly and generally diffused as that caused by a large amount of serum lying free in the abdominal cavity and exerting a steady and widely extended pressure on the return circulation. Consequently it does not appear just to compare the quick removal of a limited pressure with the quick removal of a much more widely distributed force.

From this point of view it may be inferred that the tendency to syncope after the delivery of the fœtus has been somewhat overestimated.

As a matter of fact chloroform anæsthesia is usually pushed to the surgical degree as the head emerges from the vulva. The state of anæsthesia thus produced lasts for some moments, even if the chloroform be at once withdrawn. It requires a very moderate additional amount to prolong the state of unconsciousness sufficiently to repair the perineum. I have personal knowledge of ten or twelve cases in which it has been done without appreciable ill effects.

The advisability of so doing is submitted for discussion.

Cognate to the preceding question is another relating to the use of anæsthetics during labor in subjects of organic disease of the heart. I have had occasion to pass on a number of cases with reference to the giving of anæsthetics for operations. Valvular disease *per se* is not a contra-indication. The outcome depends very largely upon the condition of the heart muscle and the degree of compensation present.

A first sound of good muscular quality, a murmur accompanying and not replacing first or second sound, absence of notable dyspnœa and œdema of lower extremities, absence of marked venous fulness form a satisfactory clinical picture.

The opposite conditions are suspicious.

Given a case of this suspicious character is it proper to use anæsthetics?

The principal element of danger attending labor in cases of cardiac disease appears to be the fixation of the thorax, and the violent, more or less voluntary expulsive efforts attending the pains. The normal negative pressure or force of thoracic aspiration is *nil*, or converted into a positive pressure which hinders instead of assisting the circulation of the blood. This condition is clearly evidenced by the flushing of the face, the venous fulness, and the increased action of the heart.

It must necessarily put a serious tax upon a weak or degenerated heart muscle.

The problem, then, is whether to allow the heart to struggle against the obstacles caused by the more or less voluntary expulsive efforts, or to annul the latter by anæsthesia, substituting the risk of the latter for the inevitable risk of the former.

It is difficult to give a categorical answer. The advantages of an anæsthetic are obvious in annulling pain, which is undoubtedly a serious source of depression, and in lessening or stopping involuntary expulsion efforts.

The proper course to pursue, so far as it can be outlined, is to use primarily all suitable medicinal means for sustaining the heart action. If the patient is not doing well, give chloroform tentatively, substituting ether at a later period if necessary for its early stimulant effect upon the heart.

This was essentially the course pursued, with good results, in three cases of the kind under discussion, of which I unfortunately do not possess notes.

The medicinal treatment of cardiac disease during labor requires allusion. Digitalis is commonly and rightly administered. It should be remembered that it has the power of contracting the arterioles as well as strengthening the cardiac systole and prolonging the diastole. Strophanthus is not open to this objection, but is not as certain or reliable in its effects. Nitro-glycerine is of much service given alone or with digitalis. Toward the close of labor its utility would be questionable as tending toward uterine hæmorrhage. Strychnia is of great use in energizing the cardiac muscle and the centres of respiration and circulation. Caffein in doses of at least five grains is very useful. The ordinary small dose is of little service. Camphor, sparteine and musk should not be forgotten.

In pulmonary disease, as severe asthma, bronchitis or bronchopneumonia, especial reliance should be placed upon the adminis-

tration of strychnia, nitro-glycerine, oleum terebinth, atropia and ammonia.

Finally, in both cardiac and pulmonary disease existing during labor, and attended with engorgement of the right side of the heart, the propriety of venesection should be considered.

#### DISCUSSION.

Dr. JEWETT.—Mr. President, we are certainly indebted to the writer of the paper for bringing before us so practical and profitable a subject, and one which I do not remember to have heard discussed.

The views held by the author of the paper in regard to the safety of chloroform after labor are in accordance with my experience. The dangers of giving chloroform at this time I am quite sure are over-stated. It has been my practice for several years to give chloroform during the repair of the perineum, and it has acted as kindly as during the labor. Formerly I used to attempt suturing the perineum without the aid of chloroform, and the method, as a rule, was unsatisfactory.

The paper alludes to the difficulty of making a good perineum at this time and the necessity of every advantage for the operator. I am inclined to think it is an easier thing to make a satisfactory repair of the perineum in the secondary operation than the primary, though that is not the general belief. In the condition of the parts at the close of labor it is frequently difficult to restore the perineum to its original integrity.

In regard to the comparison of labor with the removal of large amounts of fluid from the abdominal cavity, the author I am sure is entirely right in saying that the conditions are hardly comparable. In ascitic cases we have a pathological condition to contend with, whereas after labor ordinarily we do not.

As to the management of cardiac disease during labor, the writer of the paper is *facile princeps*, and I would hardly attempt to discuss that subject. Some six or eight cases have fallen under my observation in which the trouble was of the stenotic character at the mitral orifice; the management of these cases was very difficult and generally unsatisfactory, most of them terminating fatally. I do not quite catch the theory which he (the writer) propounds as to the difficulties of circulation in these cases, and I would like to hear his views of the theory of Hart; also with reference to Hart's treatment; with reference to the immediate cause of death, the use of digitalis and strophanthus, and if they fail, venesection.

In other forms of heart disease I have given chloroform, and have had no unhappy experience, as a rule. I recall one case of marked mitral insufficiency, in which I gave chloroform as usual, but was compelled to desist, owing to the bad symptoms which developed.

It occurs to me that the combination of nitro-glycerine with digitalis, if they be properly balanced, might be a useful measure according to the suggestion of Bartholow. The effect of the digitalis on the arterioles counteracts in part its effect on the heart.

If it were possible by the judicious use of nitro-glycerine to fairly neutralize the effects of digitalis upon the arterioles, the result would be a decided gain, and the drug thus used would not increase the danger of hæmorrhage.

Dr. DICKINSON.—There is a great advantage in pushing the chloroform a little further and suturing at once after the head is delivered, because if we wait from twenty minutes to an hour until the placenta is born, it takes a relatively large quantity of chloroform to put the patient under—sometimes as much chloroform as has been used during the whole course of a long second stage of labor. So there is manifestly a great advantage in giving the patient a small quantity of chloroform at this time and prolonging the anæsthesia which—just before—was pushed to the surgical degree. I have not done it often, but shall certainly do it in the future on account of Dr. Butler's arguments.

Dr. RAYMOND.—Mr. Chairman, I would like to ask Dr. Butler whether he would not expect that under some circumstances where there was a retained placenta, and the necessity arose for manual or other interference for its removal, there would be danger of renewing the laceration after the perineum had been restored.

Dr. CHASE.—Mr. President, this is a very profitable subject for discussion, and some features of it are entirely new. I was particularly interested in the beginning of the paper in what was said concerning the time of operating for the laceration. I have never restored the perineum before the delivery of the placenta, and the very question that Dr. Raymond propounds concerning the advisability of doing it before the completion of the third stage of labor is of great interest. If we could be sure that the placenta would be expelled by the ordinary methods we should be perfectly secure, but if for any reason there were placental adhesions, atony of the uterus, hour-glass contraction or impediment of that nature, how would the placenta be delivered without reopening the lacer-

ated parts? The question of actual experience in these cases must determine its adoption or rejection. I am desirous to know from the experience of those gentlemen who have performed the operation immediately after the birth of the child, whether or not the hæmorrhage was a matter of embarrassment. The uterus contracts and relaxes with some regularity, and with this there is likely to be the escape of blood on the sudden expulsion of the placenta. If the laceration is extensive, or irregular and difficult to repair, in many cases would not the bleeding be very much in the way of doing the work satisfactorily? If it can be done, and experience will be the test, surely there is reason for doing it at that time, as suggested by the gentlemen who have preceded me.

Regarding the risk of chloroform narcosis subsequent to the delivery of the head or placenta, it seems to me the danger is not great. I have repeatedly employed it in post-partum operations, and cannot recall one where it was not borne well; but in cases where there was serious heart lesion it might be contra-indicated. I would like to know the experience of Dr. Butler concerning the question of hæmorrhage as interfering with the work, and whether he has had any subsequent trouble in delivering the placenta.

Dr. FRANK BALDWIN.—Dr. Butler speaks of the use of caffein to support the heart in these cases. I have been much instructed by his paper, but must differ from him in the caffein question. My attention was drawn, several years since, to the risk in giving this drug where there is any danger of uræmic convulsions. I had grown bold of late, but my caution was restored by a somewhat startling experience. My patient, a young man, was very sick with typhoid fever. There was albumen in the urine, and other uræmic symptoms were present. Five grains of caffein were given, every three hours, to support the flagging heart. I think that five doses were given, and a convulsion of greater or less severity occurred within fifteen minutes after each administration. I stopped the use of the caffein and the convulsions ceased.

It is a question in my mind if it is safe to give this remedy, especially in acute cases, unless we are certain that the kidneys are in a perfectly normal condition. In the puerperal state we can seldom be certain of this.

Dr. JEWETT.—In regard to the practice of suturing before the expulsion of the placenta—that I have done in several cases. It seems to me good practice, and I shall certainly be induced to do it more frequently. It saves the obstetrician's time, and also what is more important still, saves a prolongation of the chloroform narcosis and the trouble which attends the renewal of it.



With regard to the danger of re-lacerating the perineum with manual delivery of the placenta after suture, I think that may be disregarded, for in my experience it is very rarely necessary to introduce the hand into the uterus or even into the vagina to remove the placenta. Practically I never do it unless I have an adherent placenta, and that is one of the rarest things in my experience. We hear of them frequently, but I believe it very rarely occurs, and I have been able to expel the placenta by the method of Credé sometimes, it is true, only by the use of considerable force, but if the patient is under chloroform, this is not objectionable. I am sure that in simple retention it is possible, almost without exception, by well directed compression, to expel the placenta without introducing the hand; not that I object to the introduction of the clean hand. It is a good method where there is no contra-indication, such as has been alluded to, after suturing.

The danger of chloroform, I think, arises from giving too much of it and giving it for too long a time; but I would like to hear from the author of the paper on this question. The unfavorable experience that I have had has occurred in cases where I had to give chloroform for a long time, and in patients with a bad nervous system. In one or two cases in which pulmonary thrombosis occurred I had the suspicion that the too free use of chloroform had something to do with causing the trouble. I would be glad to hear from Dr. Butler on that question, in what ways and to what degree chloroform is dangerous in case of a patient already exhausted by a long and difficult labor.

With regard to the difficulty of suturing a perineum in the presence of much hæmorrhage, when the placenta is in place and the uterus is moderately contracted upon it there is not much hæmorrhage as a rule. Free hæmorrhage is more frequent after the placenta is expelled. If there is much hæmorrhage, a sterilized gauze tampon may be used in the vagina in quantity sufficient to stay the flow over the wound, and there is no practical difficulty therefore from this cause.

The objection to caffein raised by one speaker is new to me. I was not aware that caffein could produce such effects. I have frequently given it to uræmic subjects suffering from neuralgia and it has proved a most effective remedy for the purpose. My custom has been to give three grains at intervals of a half hour until nine or ten grains have been given. I recall, however, the case of a physician's wife suffering from nephritis in which the patient took thirty grains by mistake within two or three hours with very unpleasant effects. I have never seen any trouble arise from a

dose of ten grains. It has in my hands proved an agent of so great value in the treatment of neuralgias, especially uræmic headaches, that I would be sorry to part with it. Ordinary uræmias may possibly not be considered comparable to cases of puerperal eclampsia, but I think they are.

Dr. BUTLER.—I am very glad the gentlemen to whom I proposed to leave those particular questions have answered them so much better than I could. There has been no special trouble from hæmorrhage. If it was excessive the tampon has kept it sufficiently clear for all the work necessary, as far as my experience goes. I have never been obliged to introduce the hand, and even if it was necessary, it strikes me if the perineum was sufficiently well sutured with a strong material it would stand the entrance of the hand or arm without danger of re-opening, but that also is a question which Dr. Jewett can answer with authority.

In regard to caffein, the point made by Dr. Baldwin is new to me. I have used caffein very extensively in uræmia, not only with the aim of preventing pain, headache, etc., but very often with the primary object of increasing the excretion of urine, which it invariably does, and perhaps better than digitalis or other drugs, except possibly nitro-glycerine, which is certainly the sheet-anchor in diseases of that class. The combined use of nitro-glycerine and caffein has been immensely serviceable in cases characterized by scanty flow of urine—the more acute cases. If caffein does produce convulsions I cannot remember any case where it has done so. The convulsions have seemed to me to be attributable to the uræmic condition rather than to the use of the caffein.

The quantity of chloroform has unquestionably a good deal to do with the safety of its administration in the cases of which I speak. I take it the less chloroform and the shorter the time of its administration the better it will be, and the method of suturing the perineum during the placental stage is certainly in the line of shortening its time of administration. I suppose the question of safety of chloroform during labor lies in its intermittent administration, that is being given only as the pains begin, enough to take the keen edge off of each pain, being pushed only to the surgical degree as the head emerges. In any case where there is reason to suppose or predict any unusual weakness of the heart or unusual general debility it might be well to let the patient suffer more during the labor and only use chloroform at the very end and during the placental stage.

Dr. EMERY.—What is the usual amount of chloroform to be given during labor in your experience.

Dr. BUTLER.—I am generally furnished with an ounce of chloroform. I do not think there is very much value to be attached to the amount of chloroform that disappears from the bottle during labor. The only effectual amount is that which is inhaled, and with the towel or handkerchief over the face it is difficult to say how much is lost and how much enters the patient's lungs. I take it we are to be governed in its administration more by the effect produced than the actual quantity of chloroform used. So as far as that is concerned I cannot estimate how much the patient does get; certainly the amount that is poured from the bottle does not represent by any means the quantity which the patient inhales, and how you are going to separate the two amounts I do not know.

Dr. CHASE.—The amount of chloroform the patient inhales must depend very largely on the method by which it is administered. For a long time I have been accustomed to giving patients in labor chloroform in the following manner: I take an ordinary goblet or tumbler with a small linen handkerchief in the bottom of it. My patient holds the tumbler in the hand (I have my chloroform bottle arranged by removing the cork and cutting out a small section of it, so that by tipping up the bottle I can see how fast it drops), and when the pain is approaching I can drop ten or fifteen drops on this napkin and she will take that; and I have seen chloroform administered in that way for four or five hours without using to exceed five or six drachms, for the patient utilizes almost the whole of it, whereas if it is given on a napkin held over the mouth or nose it cannot be estimated except by the effect. I think it will surprise those who have never given it in this way to see how little chloroform will produce all the effect desired.

Dr. JEWETT.—Is not there a danger in giving concentrated chloroform vapors?

Dr. DICKINSON.—If it is not foreign to the question of Dr. Emery, I would like to speak of the tumbler versus the towel method. The tumbler, I understand, is in vogue in the Sloane Maternity, and in the Nursery and Child's Hospital. I have tried it in the Long Island College Hospital and in private practice, and have been disappointed with it. During the two or three deep inspirations that precede a pain the patient needs a quantity of vapor taken in with a large amount of air. The glass shuts in the vapor, so that there can be little draft in the glass itself. I have been unsuccessful in getting the patient under chloroform quickly to head off a pain, by using the glass, whereas with a coarse meshed towel the suction of the draft of air going through the meshes rapidly vaporizes the chloroform and puts the patient under. It seemed to me the two

reasons for failure of the tumblers were that there was scant draft through the tumbler, and that the evaporating surface was very small.

Dr. GORDON.—My experience with the tumbler is the same as that of Dr. Dickinson. I saw it for the first time in the hands of Dr. Chase, and I used it for quite a while, until finally I discarded it for the napkin or handkerchief, and I find I get better results.

Dr. CHASE.—I have no knowledge about its use by others, either in hospitals or in private practice. Of course there are some precautions to be taken. After a time the little napkin in the tumbler becomes moistened, and it should be replaced with a clean, dry one. If you attempt to give chloroform that way and the patient holds her breath or breathes as she would naturally, you won't get enough; but the patient under these circumstances will learn very quickly to do what you want; so I tell her when she tips the tumbler to her mouth to breathe rapidly, and she will take six or more respirations in three or four seconds.

As to the point raised by Dr. Dickinson that there is no adequate admission of air, I think he is mistaken. It is difficult to fit a tumbler so close to the face as to prevent the admission of air.

As regards the question of mixing air with the chloroform vapor, I think that there is an ample supply of air with each inspiration, and I suspect the reason why Dr. Gordon did not succeed was because he did not instruct the patient to breathe rapidly.

Dr. RAYMOND.—Does Dr. Chase put it firmly over the mouth and nose?

Dr. CHASE.—I simply put it over the mouth and nose, not fitting perfectly. I think Dr. Dickinson is mistaken in thinking there is not rapid evaporation, unless the napkin become moist by the exhalations of the breath.

Dr. BYRNE.—The necessity for the admixture of atmospheric air with chloroform vapor is admitted by all authorities. The question, it seems to me, has been satisfactorily answered by Dr. Chase. A very large amount of atmospheric air will necessarily be inhaled from the open sides of the tumbler. There will not be a current of air through the saturated napkin, but there will necessarily be a large admixture of atmospheric air. Unfortunately I have, myself, no experience with that method of administering an anæsthetic, but, theoretically, I should say there would be no difficulty on the score of atmospheric air being admitted, and I think the practical experience which Dr. Chase has had is sufficient answer to the question. I am out of obstetrics and cannot consider myself capable of discussing these points.

Dr. EMERY.—I have used the napkin over the face of the patient, using the bottle in the manner described by Dr. Chase, putting only just so much on the napkin as the patient will naturally inhale in about three deep inspirations; I think in that way we will not get too much effect. If the patient happens to be a very nervous one I should use alcohol.

Dr. JEWETT.—I remember an operation by one of the members of this Society, several years ago, in which Dr. Corey was giving the anæsthetic. He called attention to the point that one drop of chloroform dropped upon the towel with each respiration was sufficient to maintain the narcosis.

Dr. CHASE.—I would like to inquire of Dr. McNaughton the amount of chloroform he uses.

Dr. McNAUGHTON.—The reason I mentioned that was that Dr. Chase directed his patients to take rapid inspirations, several in a few seconds, and it occurred to me that that might have had some effect in the manner in which I mentioned. I did not mean he knowingly or intentionally practiced anything of that sort.

Dr. CHASE.—I think it is only necessary for any one to take fifteen or twenty rapid inspirations to become unconscious, and it is also well established that the amount of chloroform required for narcosis, if used judiciously and economically, is really very small. Dr. Sayre, of New York, speaks of performing an operation with fifteen minims. The operation was not of very long duration, but this amount was ample, and the effect was almost immediate.

Dr. RAYMOND.—If the idea were carried out which Dr. Jewett says was the plan of Dr. Corey, a drop for each inspiration, if the operation lasted sixty minutes, it would amount to eighteen drachms.

Dr. JEWETT.—That amount would be consumed from the bottle, but not all inhaled.

Dr. BYRNE.—Much depends on the susceptibility of the patient, some requiring only a few drops and others a great deal more. The great freedom with which chloroform is now used in some parts of Europe has astonished me, and without that care which we deem necessary to take in the administration not only of that, but other anæsthetics. In Paris they do not use anything else, and I thought they used it recklessly, and yet they declared to me that they did not kill anyone with it. It is their practice before the patient gets entirely under its influence to grasp the tongue with a pinch forceps and draw it out and allow tongue and forceps to hang at one side of the mouth during the entire operation. They

give it without stint, and I have seen a great many operations there without a single accident, and they declare they do not have any from its use.

Dr. DICKINSON.—Is it not given by anæsthetizers whose business it is to give that and nothing else?

Dr. BYRNE.—No, sir; I think not as a rule; the internes usually do it. There is one place in Belgium where that is the case, and a special anæsthetic is employed in some of the Parisian hospitals; also, for private operations.

Dr. GORDON.—It seems to me in repairing the perineum immediately following the birth of the child and before the delivery of the placenta, would, in a great many cases necessitate entrusting the anæsthetic to some attendant other than the physician and would be a source of danger, as in very many cases we do not have medical assistants and cannot get one before the placenta is delivered or cannot keep the patient under the anæsthetic long enough to get one. It seems to me that in some cases it would be more than the physician could attend to, and he would have to turn it over to the nurse.

Dr. BUTLER.—If you have a trained nurse she will have had some experience in giving anæsthetics, if not, you would have to supervise it yourself, and in that case you would have to take the risk, provided you could not get professional assistance. It might possibly be an objection to that mode of procedure, but it would be a matter which each man must settle for himself. Most of the trained nurses are fairly well able to give the chloroform with an occasional glance from the physician. The quantity of chloroform which enters the circulation is an interesting point. Suppose you drop one minim on a napkin placed over the patient's face. During inspiration the patient inhales only a portion, the whole of the drop is probably not vaporized. Only a part of the drop enters the ultimate air cells of the lung, and that only by the law of the diffusion of gases.

With the next expiration a considerable portion of that chloroform vapor is carried out again. Moreover the expired breath being warmer than the air of the room and coming in contact with the chloroform on the napkin, helps further to volatilize that drop; so it is difficult to say how much of the drop gets into the lung. Hence all arguments comparing the amount which leaves the bottle with the amount which gets into the lung are very vague. I suppose it would be a liberal statement to say that only about one-quarter of the amount that leaves the bottle enters the lungs.

Dr. BYRNE.—There is one point referred to by Dr. Jewett which I cannot help noticing, as it accords so thoroughly with my own observation. For a quarter of a century my obstetric experience was pretty large in this city, and I do not think in that time I have seen six cases of adherent placenta. I have seen placenta retained a little longer than desirable, but adherent placenta I have very rarely seen. I think that in a great many of the cases in which the placenta is supposed to be adherent it would be found to be merely retained, and I do not think that the objection to its removal after the suturing is tenable. If the operation is to be done it should be done before the placenta comes away if possible, and there is no difficulty or risk to the operation, in my opinion, in removing it afterward.

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## NOTES ON RESPIRATORY THERAPEUTICS.

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BY GEORGE A. EVANS, M.D.

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Read before the Medical Society of the County of Kings, Sept. 15, 1891.

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Having been asked for a paper on the local treatment of diseases of the respiratory organs by the President of the Society, I venture to comply, encouraged by the hope that although I may not be able to place the subject before you as it appears to me, it may nevertheless be my good fortune to excite your interest and perhaps investigation.

“Respiratory Therapeutics,” as denominated by Oertel, comprehends the local treatment of diseases of the respiratory organs by the inhalation of chemical or pharmacological remedies. These may be in the form of medicated sprays, vapors, gases or solid substances, and “Pneumatic Therapeutics,” or the treatment of diseases of the respiratory and circulatory organs by alterations of the air pressure.

A careful study of “Respiratory Therapeutics,” as set forth by German writers, cannot fail to impress us with its importance, and at the same time to lead us up to the conviction that we must look to this department of therapeutics for the means to successfully antagonize many of the at-present incurable affections of the organs of respiration and circulation.

That relatively few medical men avail themselves of our present improved means for the topical treatment of diseases of the

respiratory organs, is doubtless due in many instances to disappointment that has been met with in the use of older methods of inhalation, methods which depended for their efficacy upon the inhalation of odors from slightly volatile medicaments.

Burney Yeo, writing on this subject in 1885, says: "It would be difficult to offer any sufficient reason for the failure of the profession to avail itself of such valuable therapeutic means." He suggests, however, that "it may be because the application of medicated vapors and sprays to the respiratory passages is a much more troublesome procedure than the administration of a few doses of medicine by the stomach, and demands much more attention on the part of the patient, and much more supervision on the part of the medical attendant." Continuing, Yeo says: "Various methods of treating diseases of the respiratory organs by bringing remedial measures into direct contact with them, have, after many vicissitudes, at length found a permanent place in the domain of rational therapeutics. These methods have encountered sometimes an active, and at all times an inert resistance, the resistance which determined neglect can always oppose to methods to which it might be impossible to offer a more rational mode of antagonism." On the other hand, it is remarkable, to say the least, with what pertinacity the physician clings to the practice of applying remedies to the mucous membrane of the stomach with a view to their action on the mucous membrane of the air passages.

Whenever a medical man sends a phthisical subject to a locality where the air is charged with the *odors* of pine trees, he practically admits his belief in the benefits of the local treatment of phthisis by inhalation. And yet it is a matter of common observation that many physicians who follow this practice are opposed to the inhalation treatment of diseases of the respiratory organs when artificially administered and with scientific discretion; because, as they claim, it is impossible to make use of medicament by any such means of sufficient potency to destroy the cause of the morbid processes going on in the lungs. Even so eminent an authority as Loomis,<sup>1</sup> speaking of the climatic treatment of consumption, has said: "The air must be pure—aseptic if you choose—which could be taken in the lungs on the same principle that antiseptics were used externally in the treatment of surgical affections. Cavities in the lungs could not be washed out with antiseptic solutions, and he doubted whether such solutions could be applied by inhala-

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<sup>1</sup> New York Academy of Medicine, October 20, 1887. Published in the New York Medical Journal, October 29, 1887.



tions so as to destroy the cause of the morbid processes going on in the lungs; but if the lungs could be bathed constantly with aseptic air, all was done that could be in the way of local treatment of pulmonary phthisis."

In reply to this statement it might be said, that phthisical lungs pervious to aseptic air are equally pervious to antiseptic air, and if the latter possesses an advantage over the former, then, to quote Loomis, "on the same principle that antiseptics were used externally in the treatment of surgical affections," it is our moral duty to administer it to our phthisical patients. Although there may be some difference of opinion as to the advantage of antiseptics over asepsis for aseptic tissue in surgical procedure, few will dispute the superior influence of the former over the latter in local septic conditions.

Nearly one thousand years ago Rhazes (Al Razi) wrote: "That patients die from consumption because the lungs cannot be treated like external parts." To-day, Theodore Williams<sup>2</sup> writes: "It is in chronic tubercular phthisis that the greatest triumphs of treatment have been achieved."

In 1858, Sales-Gerons demonstrated before the French Academy of Sciences a portable device for reducing or pulverizing fluids to spray. The first direct attempt to convert liquids into spray, however, was made in 1849 by Auphan, at Euzet-les-Bains, who forcibly projected a fine stream of mineral water against the wall of a small room, filling the space with mist or spray, which he caused his patients to inhale.

The penetration of fine spray into the deeper part of the respiratory passages soon became a question of such importance and excited so much contention at the meetings of the "French Academy," where it was repeatedly discussed, that a committee was appointed to investigate the matter, and finally the question was decided in the affirmative on the evidence of experiments which were made by the committee. Prior to this time very little had been accomplished in the way of local treatment of diseases of the lungs and air passages, although attempts at inhalation treatment had been made by various methods even before the time of Hippocrates. These attempts were doubtless suggested by an appreciation of the facility with which finely divided particles of dust are carried into the lungs by the inspiratory current of air, together with a recognition of the value of inhalation as a means of local treatment.

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<sup>2</sup> Pulmonary Consumption, by C. Theodore Williams, M.D., etc., London.

The spray-tube of Bergson soon displaced the inefficient, clumsy and expensive spray-producers of Sales-Gerons and others of the time, and went into immediate and general use, and shortly thereafter Siegle invented a device in which he made use of Bergson's spray-tube for the reduction of medicinal fluids to spray by means of steam instead of compressed air. We are all familiar with this instrument.

In 1875, Domanski introduced the combined application of volatile medicament with inhalations of compressed air. About five years later, Louis Sass, of New York, invented an instrument which affords a combined application of medicated spray with inhalations of compressed air. This instrument is improperly called Beseler's globe inhaler; it is, however, faulty, because the spray is projected directly at the opening through which the patient inhales, so that large drops of the medicated fluid are unavoidably brought in contact with the tissues of the patient's mouth and upper air passages. This fault limits the instrument to the use of very weak solutions of medicament.

This invention, however, served a very useful purpose by pointing out the difficulties to be overcome before an efficient instrument for the local medication of the respiratory organs could be secured. A recognition of these difficulties in 1884 led up to the invention of the device with which my name is associated, a modification of which was described in the *New York Medical Journal* of March 6, 1886. This apparatus, which has been still further improved, consists of a spherical glass vessel or spray-chamber, about eight inches in diameter, having three openings at right angles to one another, two of which are on its horizontal plane while the third is at its upper pole or vertex. Into this latter opening is inserted the lower end of a half-inch glass tube that is about six inches long, to the upper or free end of which is affixed a hard rubber screw cap with a slit in its lower or male section. Over this slit the cap is adjusted by screw action to regulate the air pressure within the spray-chamber and spirometer. Midway between the extremities of this glass tube communicating with it, and projecting horizontally at a right angle from it, one on either side, are two tubes. One communicates with a (liquid) spirometer (or a rubber bag when it is preferred), the other opens into a manometer. The spirometer demonstrates the quantity of compressed air mixed with spray the patient inhales with each effort, while the rise and fall of its liquid columns respond automatically to each inspiratory and expiratory effort, and thereby render the

admission of free air and the escape of compressed air respectively during inspiration and expiration unnecessary. At the same time this oscillating or elastic action serves to preserve the normal respiratory rhythm. The manometer registers the degree of air tension that is brought to bear on the patient's lungs during inhalation. Through one of the two openings on the horizontal plane of the spray-chamber is inserted a spray-tube, with the lower end of its vertical branch dipping below the surface of the liquid medicament, about twelve ounces of which should be in the vessel. The remaining opening is connected by a half-inch rubber tube, about two feet long, with a hard rubber or glass mouth-piece, through which the patient inhales. In the side of the mouth-piece there is a small opening, which should be closed with the finger during inspiration and left open during expiration. On the rubber tube, midway between the spray-chamber and the mouth-piece, a small glass bulb is interposed to collect condensed spray and saliva that may get in the tube.

The operation of this device is as follows: A spray of the medicated liquid is projected by means of the spray-tube and compressed air against the opposite wall of the spray-chamber with sufficient force to secure a thorough mixture of the pulverized liquid with compressed air. A very fine spray, resembling cigar smoke resulting, escapes with the air under pressure through the inhaling tube to the patient, and also through the glass tube in the upper opening of the spray-chamber to the manometer and spirometer. The patient, introducing the open end of the mouth-piece well between the lips and closing its lateral opening with the finger, inspires deeply. At the close of the inspiratory act the liquid columns in the inner and outer compartments of the spirometer balance one another, while, on the other hand, the surface of these columns reach their greatest degree of separation at the close of expiration, which should be accomplished by blowing through the terminal and lateral openings of the mouth-piece into free air. During this latter act compressed air and spray accumulate in the spirometer and spray-chamber, and are ready for use at the beginning of the next inspiration.

A modification of the spray-chamber of this instrument was found necessary about two years ago, because so much difficulty was experienced in having the vessel properly made in this country. A spray-chamber having one large mouth with three openings in its stopper was devised to operate on the same principle and fulfil the same purpose as the one described; it is, however, less convenient to manage.

About five hundred gallons of compressed air are required to successfully operate either of these instruments; that is, one inhalation of half an hour's duration will reduce five hundred gallons of air from three to two atmospheres of tension.

The medicated fluid is so finely pulverized by this process that very strong solutions are required. It has also been found necessary to incorporate not less than twenty-five per cent. of glycerine with these solutions, not only because of its beneficial therapeutic effect, but in order to prevent premature condensation of the spray.

A study of pneumotherapy, with a view to the invention of an instrument for the relief of chronic affections of the lungs and air passages, convinced me that the inspiration of compressed air of not more than one-fortieth of the atmosphere pressure, with expiration in air of normal tension, would be of the greatest possible benefit, while at the same time there would be absolutely no danger of such accidents occurring as: loss of elasticity of the lungs, pulmonary emphysema, or hæmorrhage from vessels in softened lung tissue. These influences are indicated for the relief of anæmia, functional neurotics, flat or inelastic chests, feeble respiratory power, functional and organic diseases of the heart, old pleuritic adhesions, chronic bronchitis, asthma, emphysema and pulmonary phthisis.

It is impossible in a short paper to consider more than superficially the subject of pneumotherapy in its application to diseases of the organs of respiration. I wish, however, to call attention particularly to the fact that every alteration of the tension of the inspired air or of the expired air excites increased respiratory activity, and that inasmuch as increased respiratory activity leads to a condition of increased nutrition of the pulmonary organs, we secure by these means, if judiciously applied, therapeutic effects of positive value.

During normal inspiration the intra-pulmonary air is in a condition of diffusion, and the venous blood flows from distant parts of the body to the heart with increased facility and energy, the force of the heart's action is lessened and arterial pressure is diminished. During expiration the intra-pulmonary air is compressed, the flow of blood into the thoracic cavity is retarded, and the heart acts with greater energy to overcome the increased resistance; arterial pressure, however, is little if at all increased.

The inspiration of compressed air secures at first a sense of increased respiratory power and satiety; the chest is enlarged to a greater capacity than can be secured by voluntary inspiration in

air of sea-level tension, and this augmented vital capacity continues for a considerable time after the inhalation has been discontinued. Compressed air rapidly diffuses itself with the residual air throughout the lungs, and if mucous is present in the air passages it is immediately expectorated, the arterial pressure is markedly increased, while the elimination of carbonic acid and the absorption of oxygen are much more active.

Expiration in compressed air demands increased activity on the part of the energies of expiration, a sense of thoracic fulness, and a lack of respiratory freedom is experienced similar to that which is felt by the emphysematous. The normal respiratory rhythm is interrupted in feeble subjects, the vital capacity is augmented, while the heart acts with greater energy and arterial pressure is increased.

Inspiration in rarefied air requires increased labor on the part of the muscles of inspiration; inspiration is therefore rendered more difficult, the pulmonary ventilation is diminished. This is particularly noticeable in feeble subjects; the heart's action is more rapid and arterial pressure is lessened. It has been said that inspiration in rarefied air is a good kind of gymnastic exercise to strengthen the inspiratory muscles.

Expiration in rarefied air thoroughly empties the lungs, and much if not all of the reserve air is discharged with the tidal volume; the abdominal viscera and diaphragm are drawn up into the cavity of the thorax, while the chest feels retracted or oppressed. Emphysematous subjects, however, experience relief; the venous blood flows into the thorax with greater facility and increased speed, the heart acts with diminished energy, the arterial pressure is markedly lessened, while the lungs are in a condition of almost venous congestion.

The topical treatment of diseases of the respiratory organs by means of the device last described has yielded in my hands most gratifying results. These have been obtained in patients suffering from anæmia, contracted chests, catarrhal affections of the upper air passages, both acute and chronic, pertussis, chronic bronchitis, bronchorrhœa and putrid bronchitis, peri-bronchitis and bronchiectasis, bronchial hæmorrhage, functional and organic diseases of the heart, asthma and emphysema, old pleuritic adhesions, interstitial pneumonia, chronic (cheesy) pneumonia, and pulmonary tuberculosis. While on the other hand, failure has been uniformly met with in the treatment of hay fever, laryngeal tuberculosis, acute milliary tuberculosis of the lungs, œdema of the lungs associated with renal disease, brown atrophy of the lungs,

and pulmonary carcinoma. Although in all of these affections much relief from distressing symptoms has been afforded by inhalations.

The remedies used in the treatment of the affections named consist largely of antiseptics. Simple acute and sub-acute affections of the upper air passages, however, were frequently treated by applications of cocaine, menthol or astringent preparations; and in some cases, when these had failed, inhalations of steam from infusions of emollient herbs were resorted to.

My experience with inhalations of cold air with a view to the abortion of simple acute and sub-acute catarrhal affections of the upper air passages, has not been encouraging.

Chronic affections of the air passages, unresolved pneumonia, interstitial pneumonia, and pulmonary tuberculosis have been treated by inhalations of almost all of the known antiseptic preparations; of these, carbolic acid, beechwood creasote and salicylic acid have yielded the best results, and in the order named. Chronic bronchitis associated with asthma and emphysema, however, responds more rapidly to inhalations of salicylic acid in combination with most any of the volatile oils. The more important of these are: terebene, eucalyptus, thyme, pinus sylvestris, gaultheria and mentha piperita.

Pertussis submits rapidly to inhalations of cresylic acid, coal-tar creasote and resorcin.

Bronchorrhagia is controlled by most any of the vegetable astringents, preferably tannic acid. Powerful styptic and astringent preparations, particularly those of the inorganic class, are liable to do mischief.

Oertel achieved remarkably good results in the treatment of diphtheria by inhalation with carbolic acid, while Gerhardt administered in the same way solutions of bicarbonate of soda in diseases of the mitral valves.

The utility of local applications of medicated spray has been forcibly emphasized by Oertel, as follows:<sup>3</sup>

“I consider inhalations of carbolic acid, or the analogous salicylic and boric acids, to be absolutely indispensable in the different stages of pulmonary phthisis, in chronic pneumonia, in the liquefaction of caseous infiltrations; also in copiously secreting cavities filled with decomposing products, in deep-spreading laryngeal ulcerations, to the ragged, callous margins of which the decomposing bronchial and cavernous contents adhere and undergo still

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<sup>3</sup> Respiratory Therapeutics, by M. J. Oertel, M.D., Munich.

further decomposition, exposed to the influence of atmospheric air. Again, the widespread mycoses of the air-passages and of the lungs which I have observed in the course of phthisis are best combated by the phenol spray, and the vegetable parasites which proliferate over the whole respiratory tract, even to the pulmonary alveoli, are in a short time destroyed by it."

Oertel says: "Many attempts at treatment by inhalations have not been attended by satisfactory results, because the quantity of medicine employed and the duration of its application were not in due ratio to the intensity of the pathological processes with which we have had to deal."

My own observations corroborate this statement.

In conclusion, I wish to say that although I believe the inhalation treatment of diseases of the respiratory organs to be rational from every standpoint, I neither advocate nor practice it to the exclusion of all other methods.

#### DISCUSSION.

Dr. WIGHT.—I am not in the line of therapeutics the doctor has spoken of, but I wish to draw attention to one important question or inference, if you please, that is involved in his paper, and that is, to state it very briefly, without comment and without further consideration—the local origin of many of our diseases. The paper proves that.

Dr. ECCLES.—I would like to ask why the doctor distinguishes between coal-tar creasote and carbolic acid. He mentions them as different agents, when they are about the same thing.

Dr. MOSHER.—I think it is only fair for those of us who have used Dr. Evans' apparatus to add our testimony to the value of it. I have used it for about three years, and in a variety of cases. I have mostly used the preparation of carbolic acid and glycerine, which the doctor recommends in his paper, and I have found it most valuable in cases of acute bronchitis. I have been astonished at the good results I have obtained from its use in these cases. Last winter in our cases of bronchitis produced by or accompanying the grip, I found it of especial value. It gave relief by hastening the separation of the mucus formed in the air passages, and I believe that a local anæsthetic effect is also produced by the use of carbolic acid applied in this way. I am sure all who have used the inhaler feel indebted to the originator of the apparatus and to the reader of the paper, who improved it.

Dr. EVANS.—The subject is a vast one, so vast in fact that I am almost afraid to say anything further; but in answer to Dr. Eccles,

I would say that if he should attempt the inhalation treatment of a case of pertussis on the same lines that he would treat an ordinary bronchitis, he will be surprised to find how the former will resist treatment when the latter will not. I think we all recognize that there is a neurotic element in pertussis that is not present in ordinary bronchial affections, and many writers suggest the treatment of these affections—asthma, for instance—by the use of a class of remedies that nauseate the patient, to relieve the nervous tension. Coal tar creasote is much more nauseating than carbolic acid, and its local therapeutic effect in pertussis is much more pronounced than that of carbolic acid. I made the distinction between coal-tar creasote and carbolic acid from a therapeutical and not from a chemical standpoint.

Dr. ECCLES.—The difference between the two is that coal-tar creasote is simply carbolic acid with some cresylic acid in it.

Dr. AULDE, of Philadelphia.—Mr. President, with your permission I would like to say a word in regard to the influence of inhalations in tubercular affections. During the last six months I have made a number of experiments in reference to ozonizing oxygen gas. I prepare ten gallons of pure oxygen gas and connect the container with an inhaler. In the inhaler is placed one ounce or more of peroxide of hydrogen and four to six ounces of hot water, the effect being the ozonizing the pure oxygen gas. I have noticed very prompt benefit from inhalations of that kind and was so much interested that I thought I would like to learn what the real conditions were, and concluded no better evidence could be furnished than that given by the thermometer. I took the patient's temperature immediately before, and again at the close of the séance—about twenty minutes or half hour afterwards. I found in a tuberculous patient whose temperature was only ninety-five degrees, that it would cause an elevation of the temperature of two and sometimes three degrees; you could certainly count on an average elevation of temperature of two degrees. So I judge all inhalations of that character have an effect which is produced by the ozonizing of the respired air. We can produce ozone by simply using the spray in the atmosphere. I believe the gymnastic exercise is of very considerable importance, but we have in addition increased metabolism with more combustion; destructive changes and retrograde metamorphosis go on with greater rapidity, and as a result the patients feel better and are stronger.

Dr. EVANS.—In answer to Dr. Aulde's remarks with reference to the influence of inhalations of compressed air with antiseptics on the temperature, I would say that my experience (with carbolic



acid and creasote principally) has been that the influence is very marked. It has never failed in my experience to lower the temperature. Let me cite a recent case. On the 31st day of last August a patient with phthisis presented himself at my office with a temperature of  $100\frac{1}{2}^{\circ}$ . He had an inhalation that day. The next morning at the same hour his temperature was  $98\frac{1}{2}^{\circ}$ , and it has remained normal ever since. This has been my uniform experience in cases with marked pyrexia, and I think Dr. Emery has had a similar experience with a much more feeble device, operated on the same principle as the portable inhaler.

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## TUMOR OF THE CEREBELLUM.

BY L. J. MORTON, M.D.

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Tumor of the cerebellum, although by no means a rare condition of disease, is often, by reason of the obscurity or entire absence of characteristic symptoms, overlooked or not recognized in the diagnosis *intra vitam*. In other instances the symptom-picture is most striking, and the nature of the case is easily recognized. Such an instance occurred recently in the practice of the writer, and the case is recorded as one affording an ideal illustration of tubercular tumor of the cerebellum, every factor necessary to a classically typical example of the lesion being present.

Frank G., aged ten (10) years, was the oldest of nine children, all of whom are living and in good health. The patient, although apparently strong and free from organic disease up to his eighth year, had suffered from nearly all the diseases incident to childhood, and in each instance the attack had been rather unusually severe.

An attack of scarlet fever, for example, at three years of age, was complicated by acute nephritis; whooping-cough at four, by broncho-pneumonia. Three years afterward a mild attack of measles was followed within a few weeks by acute inflammatory rheumatism, and this in turn by chorea, which was general and of an aggravated form, though under arsenic he made a perfect recovery. Both parents are living, and on his mother's side the family history is good, his maternal ancestors having been long-lived and free from hereditary disease. A paternal uncle and aunt, however, died of phthisis, and the children of another aunt were tuberculous, one of them suffering from hip-joint disease of this type.

The father himself has had repeated attacks of bronchitis, though apparently free from any organic pulmonary affection. Several months after recovering from chorea, the patient meantime having been well and having gained flesh, the cervical glands of the right side became affected with an adenitis which resisted all local and constitutional measures of treatment.

Surgical interference was finally advised; the glands were removed in the early fall of 1890. He did not improve after the operation, but continued to grow weaker. About six or eight weeks after the operation it was noticed that the boy showed decided unsteadiness in walking. He would stumble and reel, and had to assist himself by catching hold of articles of furniture to keep from falling. The reeling was usually toward the right. He complained much of vertigo and of intense pain at times in the back of his head. Occasionally, later on, he would vomit, the emesis being of the so-called cerebral type, occurring without any definite cause and especially upon sudden movements. Sleep was very poor. His weakness and vertigo increased until he was compelled to take to his bed, where he remained till his death, some six or seven months later.

During this period the symptoms developed. He was observed to hear imperfectly through the right ear, while deafness increased, until finally it became absolute on the right side. Sight was affected early and culminated in absolute blindness sometime previous to death. Convulsions occurred at irregular intervals during the last two or three months of illness, which were always general, though varying in intensity and severity.

There was never any distinct type of paralysis of the facial nerve or affecting the extremities, though in the latter there was a general paretic weakness, diplegic in distribution, with marked exaggeration of all major reflexes. The sphincters ani and vesicæ and detrusor urinæ muscles were involved, as shown by involuntary passage of urine and fæces. The tests made of peripheral sensation were not positively satisfactory. His mental faculties were but little affected up to the last. Death occurred from profound exhaustion and involvement of the vagus nuclei, the patient's body being emaciated to a degree which was ghost-like.

The diagnosis was a matter of comparative ease, even in the earlier stages of the case. My suspicion of tumor of the cerebellum entertained at that time was confirmed subsequently by Dr. W. B. Pritchard, of New York, whom I called in consultation. The headache, insomnia, vertigo, vomiting and blindness, with convulsions, testified a diagnosis of tumor, while the ataxia of station

with the localization of pain in the occiput, the vertigo and the type of motor loss of power in the extremities, indicated an involvement of the cerebellum. The tendency to reel toward the right, with right-sided deafness, indicated disease of the right lobe with involvement or coincident involvement of the vermis, which was certainly involved early. The family history, with a malignant adenitis in the patient, made evident the tubercular character of the disease process. The case was, therefore, decided at the time of consultation to be one of tubercular tumor, located in the right lobe of the cerebellum and involving the vermis or right peduncle. At the autopsy, done twelve (12) hours after death by Dr. Pritchard, assisted by the writer, the skull was found to be exceedingly thin. The calvarium was removed with more than usual difficulty, because of the adhesions of the dura. The surface of the convexity of both hemispheres appeared normal except for a slight congestion of the vessels of the pia arachnoid. Upon attempting to lift the brain mass from the skull, it was found to be strongly attached to the floor of the skull on the right side and the dura was torn by the force necessary to remove it. Nearly two ounces of fluid escaped, presumably from the ventricles, in taking out the brain. Upon examination, nothing abnormal was noted upon the surface of either cerebral hemispheres except as noted above, though the entire brain mass seemed softer than usual, as though water-logged. The convolutions were well marked; normal in location. Upon examining the cerebellum a hard mass could be felt upon the basal surface of the right lobe (cuneiform lobule), extending toward the median line, of about the size of a large walnut. Its basal surface was exposed, the dural covering having been torn off in removing it and remaining firmly attached to the floor of the skull in the right posterior fossa, covering over the foramen for the exit of the auditory nerve of the right side. This nerve had been entirely destroyed by pressure and involvement in the disease process. The apparent origin of the tubercular mass had been in the meninges. The mass was cheesy in consistency. The right peduncle, as well as the vermis tonsilla, was involved by pressure. No sections have been made yet, as the process of hardening has not sufficiently advanced, but no evidence exists, upon careful superficial examination, of any other tubercular masses.

IN WHAT RESPECTS ARE THE THERAPEUTIC INDICATIONS IN ACUTE DIFFUSE PERITONITIS MODIFIED BY THE ÆTIOLOGICAL FACTORS?

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BY THOMAS H. MANLEY, M.D.,

Visiting Surgeon to Harlem Hospital, New York.

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Read before the State Medical Association in New York, October 28, 1891.

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To this question one might at once give a definite and epitomized answer, that in diffuse peritonitis the same therapeutic indications exist, according to causative conditions, as in the general inflammation of any other serous membrane in the body.

Regardless of what the causation, the objective treatment must be identical in all cases of diffuse peritonitis during its acute stages. This will be directed with a view of relieving pain, securing rest, sustaining the patient, moderating the violence of the disease, or aborting it in its early stages.

The fundamental principles which should guide us in the therapy of the malady under consideration, notwithstanding the extensive experimental work of the laboratory and studies of a biological and bacterial character, have undergone no material change in our time.

It was supposed that the antiseptic theory and the discovery that the great lymph sac of the abdomen might be invaded with impunity, would revolutionize the treatment of peritoneal inflammation. But it required only a brief period to incontestably demonstrate that chemical solutions when introduced into serous cavities, by their irritating action were so frequently followed by direful results, that they seldom or never can be safely employed for flushing the peritonæum. The claim that exposure and manipulation of the peritonæum, is a harmless procedure, is another modern delusion; for we have no evidence to-day, of any description whatever, that the peritonæum is any less vulnerable to violence than it was in a past decade or century.

I.—GENERAL IDIOPATHIC PERITONITIS.

Independent of an infective inflammation arising from a diseased organ or structure and thence propagated to the entire serous membrane, we will meet with peritonitis, in association with those constitutional maladies, in which, one or more of the fibro-serous membranes, is the seat of inflammatory changes.

That general peritonitis may develop *de novo*, I believe is beyond question; arising from sudden atmospheric changes, exposure and depressed health.

Malaria, syphilis, tuberculosis, malignant and benign tumors; renal, hepatic and cardiac diseases, with many other maladies, in which the depuration of the blood is defective, the peritonæum is often the seat, of a low, insidious form of inflammation, attended with a large serous effusion.

The causative factors, underlying all those varieties of inflammation in every instance, is irritation. The irritant being conveyed through the circulation to the seat of action. A clinical peculiarity marks the different varieties of peritoneal inflammation. They are all *painful*, or *painless*. In some of these cases, however, in which the peritoneal inflammation is secondary, is pain generally of a less aggravated description. Indeed, not infrequently, congestion, effusion and absorption, may pass through their various stages, without any serious inconvenience, except from the pressure of accumulated fluid, against adjacent viscera.

In all these cases of general peritonitis, arising in connection with certain constitutional maladies, treatment must be directed rather toward the several conditions than to local manifestations.

For that phase of the malady dependent on specific infection, the mercurials will be administered with a free hand; for the malarial, arsenic and quinine; for tubercular, such remedies as modify or arrest the course of that pathological process.

Certainly, when ensuing as a consequence of toxic elements in the blood, which have been derived from an infectious disease, the efforts of the medical attendant must be mainly, directed, toward neutralizing the poison in the circulation and stimulating the emunctories, to hasten its elimination.

#### II.—APPARENT IDIOPATHIC PERITONITIS; NOT DEPENDENT PRIMARILY ON CONSTITUTIONAL IMPLICATION.

Of late years it has been maintained by many distinguished authorities, that it is a question, whether, acute, diffuse peritonitis ever develops, except as a secondary consequence, of pathological changes in parts, adjacent to the peritonæum; as infection from perforation of the intestine, or propagation of inflammatory changes in structures, over which a reflexion of the peritonæum, may lie.

If this position were tenable, one would reason that the whole therapy of acute peritonitis must be revolutionized; for instead of treating the case on empirical lines, as is the practice which generally obtains, we should commence in every instance, by first

endeavoring to ascertain the precise ætiological factors, in operation, in each case.

If, for instance, if there were perforation of the intestine, gall or urinary bladder, rupture of an abscess; or extension of an ulcerative process, we would open through the abdominal walls, seek out the source of the original trouble, remove whatever effete or septic material, which lay in the way, repair the lesion and close in the parts.

This is the only logical conclusion to which we can arrive in these premises; hence, our therapeutical resort should be rather mechanical and chemical, than empirical or vital.

Acting on this assumption, of late years, so extensive and frequent are becoming sections into the peritonæum, that a new specialty has arisen, known as "abdominal-surgery." And, instead of the ancient cautious, conservative methods, which were characteristic of a past generation of practitioners, in dealing with diffuse peritonitis; latterly the scalpel has been boldly taken in hand, the abdomen opened, its contents freely and leisurely manipulated, the peritoneal cavity drenched with chemical solutions, employed to destroy infective agencies and prevent the farther advance of inflammatory changes. Besides, a tube was left in the gaping wound to carry away the residue remaining, of effete products.

Very often when the abdomen was opened, in conformity with this line of practice, no well defined local lesion could be discovered, but rather, a yellow plastic, flocculent material, in places partly organized and adhesive; and again, more or less of it undergoing disintegration.

When the belly was opened under these circumstances, the consequences were usually promptly mortal; few surviving twenty-four hours, after the operation.

While the theory which has been advanced, that general acute peritoneal inflammation always arises from local morbid changes, is not wanting in pathological support, as revealed by post-mortem examination in the majority of cases; yet, when we have a correct knowledge of the wonderful and peculiar property of the peritonæum in walling off and confining suppurative accumulations, sealing up perforations, absorbing secretions and often providing a vent for them through the excretory ducts, we can the better comprehend the processes of Nature called into active operation, when the integrity of this serous membrane, is threatened.

The present, general reaction, both in America and Europe, against the employment of antiseptics, chemical solutions of every

description, in the surgery of the serous cavities; the conceded imminent danger to life, always attendant on incisions, which entail exposure of the abdominal organs; the additional risk, connected with pulmonary anæsthesia, in the presence of a high temperature and active inflammatory processes, have each and all, served as warning, which none but the rash and reckless will ignore, and which, after all, in the treatment of general diffuse peritonitis, have left us, about where we were, when opium was regarded as our sheet-anchor.

Admitting, then, in part at least, that general, acute peritonitis is most frequently a secondary process; still, when measures are instituted which contemplate the exploration of the peritoneal cavity and dealing directly with diseased foci, or the primary lesions, such intervention is attended, with so much danger to life and the prospects of recovery so much lessened, that our reliance must be rather on tentative than radical methods; on internal, epidermic and hypodermic medication; on sound hygiene and such measures as will sustain the strength, until the violence of the disease is spent.

### III.—TREATMENT OF PERITONITIS AS BASED ON CLEARLY DEFINED ÆTIOLOGICAL FACTORS.

Owing to the periodical activity of the female generative organs within the pelvis; to their abuse, their frequent pollution by infection through the male organ; or through contaminated wounds along the genital tract; and to the demands of modern life in women, peritonitis, local and general, is a very common disease. But with them it usually pursues a subacute or chronic course, except in the puerperal variety, and is comparatively, seldom fatal.

I never saw but one case of non-traumatic peritonitis, in the female, end fatally.

On the contrary, with the male, diffuse acute peritonitis is a comparatively rare disease. It runs a short acute course and is attended with a great mortality.

This notable contrast in the sexes; the clear and unmistakable ætiological factors in the one, and the greater gravity in the other, have a distinct and important bearing on the question of treatment.

The pain of peritonitis, in woman, not being so violent, and is better borne; we may deal with her case in security, with milder measures. But with the male, our intervention must be prompt and energetic; for peritoneal pain, if not subdued, is quickly mortal with him.

Now, the physician, in the presence of a typical case of general acute peritonitis, devoid of complications, must not stop to concern himself about the original, ætiological factors, but proceed at once rather, to deal with *a condition*. This brings us to the question of treatment and the fundamental principles, by which we shall be guided, in dealing with acute, general peritonitis of the type under consideration.

Let us see what our patient's condition precisely is at the onset of his malady, that we may the better learn what the therapeutic indications are:

First. He is suffering from bodily weakness; he sleeps little and has lost his appetite. The heart's action is feeble and accelerated. The temperature indicates fever. He is in constant pain, of varying intensity. He is in a melancholy state of mind. There may be more or less thirst. He lies on his back with his knees raised. Coughing, sneezing, sighing, or bodily movement increases his distress; hence his abdominal and thoracic muscles are more or less fixed, and he respire with short, shallow gasps. The belly is hard and flat, though in cases of great gravity it may be tympanitic. The bowels are closed and urination may be difficult or impossible.

The integument and subcutaneous tissues, over the ventral regions, anteriorly, especially, are extremely sensitive to pressure; and the cellular membrane, immediately beneath the skin, along the muscular planes, is the seat of a free inflammatory exudate.

Clearly, our first move will be to place our patient in such a condition, as to best resist the violence of the disease and prevent it from making further progress. Here we will find that to a large extent, nature has anticipated us. The body is in a state of rest; secretion is in abeyance. The inflamed muscular coat of the intestine is paretic, and hence peristalsis has mostly ceased. Digestion for the time is impossible, and we are warned not to force it, by the persistent loathing for food, which is always present.

The system craves liquids, but the stomach will not tolerate them in large quantities.

The first indication in the acute stages of peritonitis, will be to relieve pain.

It is my conviction that it is of no consequence, what the agency be, which we employ for this purpose, provided, its use will not seriously, jeopardize life. Hence, why, not infrequently, free leaching of the abdominal parietes, the application of moist heat, sinapisms, or blisters, often act in a prompt and salutary manner. And, if not alone, they will in conjunction with other remedies, serve a most useful purpose.



When, however, the pain is of an aggravated character, we must employ a drug which will quickly ameliorate or wholly control it.

For this purpose there is nothing in the pharmacopœia that will equal opium; for it serves in a marvelous manner, many important purposes: 1st, as an analgesic; 2d, as a narcotic; and 3d, as a mental exhilarant. Authors have been said to employ it to "lock up the bowels" and to "splint the intestine." This is "far-fetched" and without any foundation in fact; for, from the onset of the malady, the intestine is crippled, and constipation is the rule. So continuous and protracted is this, that of late, since the abdominal incision is regarded as so trivial a matter, there are cases reported, where the inexperienced, have mistaken this parietic state of the intestine, for internal obstruction and opened the abdomen, to find nothing.

Nor is any splinting, necessary, but rather relaxation; for the inflamed and infiltrated abdominal walls, in a state of spasmodic contraction hold the visceral contents, in a tight grip.

Opium is the ideal remedy here, for it buoys up the spirits and relieves pain; secures to the patient ample sleep. What it accomplishes toward the full restoration to health beyond this is in an indirect manner.

Unhappily, however, the free administration of opium and its alkaloids is full of danger in the hands of the incautious, or inexperienced. Idiosyncrasies must be watched for and the cumulative action, of the drug, guarded against. It should be always administered, hypodermically, commencing with small doses. For its full therapeutic effect, the drug must be given freely and frequently. This necessitates a large sacrifice of time on the part of the medical attendant. And if he is not ready to make it, then his patient's chances of recovery, will be better by the employment of some other remedy, attended with less risk to life.

Opium, though without a rival in peritoneal inflammation, yet after all in itself, serves but a subordinate purpose; for the relief of symptoms only. It makes no impression on the underlying pathological process, but may, through masking symptoms, give rise to delusive hopes, so that the patient may imagine himself out of immediate danger, while mortal changes only too manifest to the medical attendant, declare the approaching end.

Mercury, since time immemorial, has been known to exert a specific action on inflammation.

In the inflammation of serous membranes, if administered with energy and intelligence at the onset of the attack, it stands un-

rivalled, serving the double purpose of arresting the plastic exudate and hastening its absorption. In conjunction with opium,\* it constitutes a sovereign remedy. Simultaneously with opium its administration must be commenced. Nor should we be deterred, because, when excessively or injudiciously employed, salivation or its toxic action may occasionally occur. Used with proper discrimination and judgment, this painful complication should seldom or never arise. As the stomach is extremely sensitive in peritoneal inflammation, the most effectual manner of administering the mercurial salts, will be, either by hypodermic injection or by inunction. It must be unsparingly employed, in all cases, until one of three things, is distinctly manifest: 1st, that its therapeutic effect has been partly attained; 2d, that symptoms of ptyalism are present, with no abatement of the disease; and 3d, when signs of approaching dissolution are evident.

In diffuse, acute peritonitis, then, opium to secure comfort and mercury as an antiseptic, if you like, or antagonistic to those toxic, lethal elements in the blood, which in high fever always paralyze cardiac impulse.

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### ACUTE CORYZA.

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Dr. M. D. Lederman, of New York, finds the following mode of treatment very beneficial during the congestive stage of an acute nasal catarrh. The nasal chambers are sprayed with any of the antiseptic solutions, Seiler's preferred, until they are sufficiently cleansed, and then the following solution is used :

℞	Cocaine,				
	Menthol,	-	-	-	aa gr. xx.
	Benzoinol,	-	-	-	℥ ij.
M.	Ft. solution.				

The feeling of fulness in the nose, associated with the dull frontal headache, is no doubt the result of extreme congestion. For the relief of these symptoms, cocaine has been used for a considerable period, but it has been found that its effect soon passes off, and the patient is left in the same uncomfortable position as before. To obviate this menthol was added to the solution. Menthol is a local anæsthetic, and in combination with cocaine, it keeps up the local depletion and leaves a pleasant coolness in the nasal chambers, enabling the patient to breathe through the natural passages. Benzoinol is used in this solution as the menstruum, on account of its bland and unirritating qualities, and freedom from unpleasant odor.

## PROCEEDINGS OF SOCIETIES.

### MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society's rooms, 356 Bridge Street, Tuesday evening, October 20, 1891, at 8 o'clock.

Dr. West in the chair.

There were about seventy-five members present.

The minutes of the September meeting were read and approved.

The Council reported favorably upon the following applications for membership:

Drs. Peter V. Burnet, Silas C. Blaisdell, Wm. A. Myers, Walter O'Brien, Addison L. Coville, Oscar Embden, James B. Warden, Jos. A. Livingston and John O. Polak.

The following applicants having been favorably reported upon by Council, were declared elected to membership:

Drs. James M. Horton, Sylvester J. Byrne and Henry Noss.

The following applications for membership were presented:

Drs. Alfred Costales, 518 Evergreen Avenue, Bellevue, 1878; William L. Hunter, 462 Adelphi Street, Univ. of Buffalo, 1890; Frank C. Milbury, 434 Jefferson Avenue.

Dr. Burr B. Mosher, 131 So. Oxford Street, L. I. C. H., 1890; proposed by Dr. Eliza M. Mosher; Dr. A. J. C. Skene.

Dr. Philip Mills Jones, Berkeley Place, L. I. C. H., 1891; proposed by Dr. Wm. Browning; Dr. Geo. McNaughton.

Dr. George S. Williams, 1090 Greene Avenue, Univ. City of New York, 1890; proposed by Dr. J. H. Raymond; Dr. Geo. McNaughton.

#### SCIENTIFIC BUSINESS.

*Report of Committee on Obstetrics.*—"Early Diagnosis of Pregnancy," by Dr. Charles Jewett.

"Report of Cases of Early Diagnosis of Pregnancy," by Dr. R. L. Dickinson.

These two papers were discussed by Drs. Skene, Wallace and Minard.

Dr. Walter B. Chase read a paper entitled "Absorption of Uterine Fibroids," which was discussed by Dr. Skene.

There being no further business, the meeting adjourned.

DAVID MYERLE, *Asst. Secretary.*

## THE KINGS COUNTY MEDICAL ASSOCIATION.

The December meeting of this Association will be occupied by a paper by Dr. J. D. Sullivan on "Report of Two Cases of Nephrectomy."

All regular practitioners of medicine and medical students are invited to attend the meetings and participate in the discussions, and to remain as guests of the Association after the meeting.

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*PROGRESS IN MEDICINE.*

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SURGERY.

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BY GEORGE RYERSON FOWLER, M. D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

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ON CARBOLIC GANGRENE.

A. Frankenburger (Inaug. Dissul., Erlangen, 1891). The author points to the dangers arising from the prolonged use of even weak solutions of carbolic acid. Severe disturbances of nutrition have been known to follow even a two-per-cent. solution, used in moist dressings upon the extremities. According to F.'s observations, and as a result of his experiments upon animals, the disease is due not only to the effect of the acid upon the vaso-motor nerves, but to the destructive effects of the agent upon the blood corpuscles themselves, both red and white. This latter seems to partake of both a chemical and mechanical influence, stasis occurring first in the capillaries, and finally in the larger vessels, the nutrition of the part being interfered with, and the removal of waste products being prevented. Maceration of the epidermis favors evaporation, and a process of mummification or dry gangrene results. The disease is of rare occurrence, and some predisposition on the part of the patient is probably present.

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ON MAMMARY TUBERCULOSIS.

Roux (Geneva, H. Stapelmohr). This rare disease has been investigated by R. Thirty-four cases are carefully collected and studied. Thirty-two of these occurred in female and two in male patients. In two cases both breasts were involved; in eighteen the right, and in thirteen instances the left was the seat of the disease. The ages of the patients varied from sixteen to fifty-two

years of age. Pre-existing tuberculous or scrofulous affections were noted in twenty-four cases. The majority of the women had borne and nursed several children. In only three instances was there obtained a history of traumatism.

The disease is divided into three varieties by R.: 1st, cold abscesses within the organ—a very rare form; 2d, disseminated tuberculosis; 3d, confluent tuberculosis. In twelve cases the presence of tubercular bacilli were demonstrated. Twenty-two patients showed marked axillary involvement; as a rule other organs were likewise the seat of the disease. The lymph channels and blood-vessels were both shown to be the route of invasion; in addition, extension from tuberculous affections of contiguous structures (ribs, sternum, etc.) occurred. Primary tuberculosis of the mamma is possible through the lactiferous ducts. Its development in the intra-acinous connective tissue of the mammary gland occurs precisely as in other glandular organs.

The cold abscess variety usually develops in the superior, or in the superior and external segment of the breast. A fluctuating tumor is found, movable with the gland itself, upon the walls of the thorax. In the later stages of this variety the overlying skin becomes altered, pain is present, and finally the abscess bursts, leaving a characteristic fistula. In the disseminated variety, a secondary growth in the axilla is noticed before the mammary disease attracts attention. Resistant nodules develop very slowly in the breast in this variety, remaining stationary for years; in some cases these become confluent and constitute the third variety of the disease. In cases confluent from the commencement, an early enlargement of the mamma occurs, the nipple is retracted, a circumscribed tumor is formed, situated in the upper and outer portion of the gland, and sometimes extending to the axilla; in this latter extension enlarged glands are felt. Softening occurs, and finally rupture.

The prognosis is favorable when the case is uncomplicated by tuberculosis elsewhere. Removal of the breast and of all affected glands is the safest curative expedient.

#### ON LOCAL ETHERIZATION OF INCARCERATED HERNIA.

Finkelstein (Berliner klin. Wochenschrift, 1891, No. 20). In 1882 F. recommended refrigeration of the hernial coverings by means of ether in cases of otherwise irreducible or strangulated hernia. The procedure consists in pouring about half an ounce of ether upon the hernia and ring every fifteen minutes. In the majority of cases this resulted either in a spontaneous return or such a diminu-

tion in the size of the herniated mass as to permit of its easy reduction. This effect was more certain to occur if the bowel is not in a condition of paralysis from previous manipulation in the effort to effect reduction by the taxis. It is recommended to anoint the scrotum, penis or labia with oil before the application of the ether.

F. communicates a number of cases treated by this method.

CONTRIBUTIONS TO OUR KNOWLEDGE OF HERNIA OCCURRING AT THE  
CUL-DE-SAC OF DOUGLAS.

Otto Juckerhandl (*Deutsche Zeitschrift f. Chirurgie*, Bd. xxxi., p. 590). Ebner's theory that all hernias appearing at the lower pelvic opening have their origin in a diverticular descent of the peritonæum between the rectum and uterus or bladder, and that this occurs not mechanically as by trauma, but has a definite anatomical origin, is supported by J. He shows by studies of the involved parts in the embryo that the peritonæum prior to complete development passes much more deeply at this point than is found in the fully formed fœtus or in adults. The predisposition to hernia here is therefore the result of an arrest of development. Ziegenspeck, in fifty-six autopsies, found two instances in which a prolongation of the peritonæum passed between Lirschka's muscle (retractor uteri) and the levator ani. In other instances openings extended from the base of Douglas' cul-de-sac into the underlying tissues.

DERMATOL: A SUBSTITUTE FOR IODOFORM.

Heinz and Liebrecht (*Berliner klin. Wochenschrift*, 1891, No. 24). The substance known as "dermatol," which in reality is a basic or subgallate of bismuth, is highly praised for its virtues as a dry antiseptic powder. It is odorless, insoluble, drying and astringent; it is apparently not absorbed, and therefore is non-poisonous. It is effective in fresh as well as in older wounds, and particularly when the latter are the seat of unhealthy granulations. In diseases of the eye, ear and nose, as well as in the domains of dermatology and gynæcology.

Glaeser confirms these assertions, and recommends it particularly for ichorous ulcers and skin defects in which granulating tissue is deficient or absent.

## OBSTETRICS.

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 BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

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## TETANUS AFTER ABORTION.

Henricius (*Centralblatt f. Gyn.*, Aug. 15, 1891) reports a case of tetanus after abortion with an apparently clear history of infection.

The patient had been examined during the abortion by a physician who had been in attendance on a case of tetanus nascentium with an ulcerated umbilicus. Both cases, too, had been under the care of the same nurse and it had been part of the nurse's duty to dress the umbilical wound—the interval between the two cases being less than two weeks. Tetanic symptoms developed in the abortion case during the third day after the expulsion of the ovum, and the patient died three days later. The brain and cord were found everywhere studded with hæmorrhagic foci and the gray matter of a dark brown color.

## ARTIFICIAL PREMATURE LABOR IN NARROW PELVIS.

Schönberg (*Arch. d'Obstet. et de Gyn.*, Sept., 1891). In the Maternity of Christiana out of 4708 deliveries, this operation was done in 36 cases on 21 different women. The foetal mortality was 34.8 per cent. Of 30 children presenting by the head 60 per cent. were born alive and of 6 breech births 60 per cent. were saved. S. holds that the operation is absolutely indicated in narrowing of the pelvis to  $2\frac{3}{4}$  or 3 inches. In more pronounced contraction, Cæsarean section has the superior claim. The method employed in the 36 cases was the warm douche and the bougie. Puncture gives equally satisfactory results.

## PREGNANCY AND HEART DISEASE.

Remy (*Arch. de Tocol. et de Gyn.*, Aug., 1881) reports a series of fifteen cases of death in the latter months of pregnancy from cardiac disease. In seven cases the child was extracted by post-mortem Cæsarean section or version. Three children only were saved and these in cases in which the mother had died suddenly. The author discusses the question of premature delivery. When the labor is safely terminated the mother is left for a time in better condition than before. On the whole, however, the ultimate

results of premature delivery are not encouraging. Again, the labor itself places the patient for a time in great peril of fatal asystolism. For grave cardiac disease with serious complications early abortion is a far safer procedure. No general rule can be laid down, however, but the course to be pursued must depend upon a careful estimate of the conditions in the individual case. (Br. Med. Jour.)

#### CÆSAREAN SECTION IN PUERPERAL ECLAMPSIA..

Von Swiecicki (*Der Frauenzart*, Sept., 1891) has recently done Cæsarean section on the above indication unsuccessfully for both mother and child. The child could not be resuscitated and the mother died of œdema of the lungs. This is the tenth case in which the Cæsarean operation has been done for eclampsia as advocated by Halbertsma. The record for the mothers stands six cases saved and four lost. Von Swiecicki thinks the operation not so promising as H. was led to believe. Yet he considers it justifiable in eclampsia near term when the child is alive and cannot be delivered by the natural passages whether owing to the fact that labor is not established or to pelvic obstruction. (Br. Med. Jour.)

#### ECTOPIC PREGNANCY.

Krassowski (*Arch. d'Obstet. et de Gyn.*, Sept., 1891) attaches great diagnostic value to the examination of the products of curetting the uterine cavity. The most reliable diagnostic measure, however, is an exploratory laparotomy. An ectopic gestation cyst he regards as a malignant neoplasm. The treatment should aim first to arrest the growth of the foetation cyst. Second to remove the tumor with the entire ovisac if possible.

#### OPERATIVE INDICATIONS IN EXTRA-UTERINE PREGNANCY.

Szuman (*Arch. d'Ostet. et de Gyn.*, Sept., 1891) lays down the following rules for the operative treatment of extra-uterine pregnancy:

In the first months, he advocates electricity with or without puncture; this failing to arrest the pregnancy, laparotomy with removal of the fruit sac.

In case of pregnancy in a rudimentary horn, with grave complications, S. advises an attempt at curetting through the uterine orifice. In the event of much hæmorrhage, he renounces the curette.

In case of rupture without grave symptoms, the foetus having ceased to grow, wait.



If the fœtus continues to grow after rupture, or if serious complications develop, laparotomy should be done with removal of the cyst.

In extra-uterine pregnancy at term, fœtus living, the treatment is laparotomy with a view to save mother and child; fœtus dead and no complications arising, wait eight to ten months and then remove the cyst by secondary laparotomy. Interfere sooner for cause.

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## PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M. D.,

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### DISINFECTION OF EXCRETA.

This was the subject of a paper by Dr. Sternberg, read before the Section on State Medicine of the American Medical Association, at its last meeting in Washington. The object of the paper was to inquire whether the recommendations of the Committee on Disinfectants of the American Public Health Association are sustained by more recent investigations (*Jour. Am. Med. Asso.*, Aug., 1891). He states that sulphate of iron or chloride of zinc are good deodorizers and useful antiseptics, but that they cannot be depended upon to destroy infectious disease germs. He thus clearly distinguishes between an antiseptic and a disinfectant. Sulphate of iron will arrest or prevent putrefactive decomposition, but a saturated solution of it will not destroy the vitality of disease germs. He reviews the experimental results obtained by Dr. Bolton in 1886, with chloride of lime, and confirmed by Dissen in 1890. This latter author, experimenting in Koch's laboratory, found that one per cent. of chloride of lime could be depended upon to disinfect the fæces of typhoid fever and cholera in ten minutes. Carbolic acid in one per cent. solution is capable of destroying in two hours the specific organisms of typhoid, cholera, diphtheria, glanders and erysipelas. This strength is less than that usually recommended, because when used to completely sterilize from spore-bearing organisms, a strong solution is required. It is now believed that the specific organisms of the above diseases do not form spores, and that they cannot survive two hours in a one-per-cent. solution.

At the International Sanitary Conference of Rome in 1885, the following strength of these agents were recommended for the disinfection of excreta:

Carbolic acid, five per cent. ; chloride of lime, four per cent.

Of creolin, he recommends a four per cent. recently-prepared emulsion as a disinfectant for typhoid and cholera fæces, allowing it to act for two hours. He states that creolin is probably the same article that is sold in this market under the name of *Little's Soluble Phenyle*. Jaeger found that a two-per-cent. solution of creolin destroyed tubercle bacilli. He then reviews the experiments with quicklime, in the form of milk of lime. His own experiments, as well as those of others, show that a twenty-per-cent. milk of lime is an efficient agent for the disinfection of typhoid and cholera fæces, but a much longer exposure must be given than with chloride of lime. For this reason he gives the latter agent the preference for the disinfection of fæces in the sick-room, while lime, owing to cheapness, he would give first place for the disinfection of excreta in privy vaults, or on the surface of the ground. He adds, that the addition of boiling water in the proportion of three or four parts to one part of the material to be disinfected, may be safely recommended for such material.

Or, better still, a boiling ten-per-cent. solution of sulphate of iron or chloride of zinc in the same proportion.

#### TIN IN CANNED FOODS.

The question of tin in canned foods has recently excited new attention, because of some serious results reported from eating articles of food containing tin.

Van Hamel Roos (*Revue Internationale des Falsifications*, Vol. 41, 179) in reviewing the subject, says: "Sedgwick was the first to prove poisonous effects from tin in preserved foods, in the case of some pears, which had been prepared in a tin saucepan, while another is mentioned by him terminating fatally."

Prof. Beckurtz presented some new observations on tin in canned goods before the Congress of German physicians at Heidelberg in 1889.

He claimed the formation of tin sulphide by the action of the albuminous matters of the fruit upon the tin.

Nehring, at the same congress, reported having found in asparagus 0.186, 0.315 and 0.227 per cent. of tin. The result of the discussion was a vote recommending that tin plate should be forbidden for the making of vessels in which articles of food are to be preserved.

Capt. Winckel reported to the Hygienic Congress, Amsterdam, 1890, that 270 soldiers had fallen ill after eating lettuce and meat which had been preserved in tin.

The amount of tin, according to Prof. Bettink, varied from 19 to 72 milligrammes per kilo. Kayser, of Nuremberg, reported that some preserved eels, which had proved injurious to those eating them, contained 0.19 per cent. of tin.

The quantity of tin dissolved depends greatly upon the time of contact.

Thus, from a can of asparagus thirty-one years old, the tin had nearly all dissolved from the iron. A tin of beef, eight years old, contained 77 milligrammes of the oxide of tin. Six-year-old asparagus contained 56 milligrammes; while four-months-old asparagus, but 11 milligrammes. Apricots contained 20 milligrammes per tin, and pineapples 178 milligrammes per kilo.

Van Hamel Roos recommends the use of tin that has been coated with a special varnish, for the manufacture of tin cans for fruit, etc.

<i>Article Examined.</i>	<i>Tin, dioxide. Grs. per lb.</i>	<i>Equivalent to Sn Cl<sub>2</sub></i>	<i>Maximum doses.</i>	<i>Minimum doses.</i>
Pumpkin.....	2.97	3.74	6.4	51.4
Pumpkin.....	3.11	3.91	7.	56.
Pumpkin.....	0.38	0.48	1.	7.7
Squash.....	1.85	2.33	4.	37.
Tomatoes ..	0.84	1.06	2.	16.
Tomatoes ..	0.98	1.23	2.5	19.
Peas (French).....	0.48	0.60	1.2	9.6
Mushroom (French).....	1.40	1.76	3.5	28.
Blackberries ..	0.80	1.01	2.	16.
Blueberries.....	2.10	2.64	5.3	42.
Salmon ..	0.94	1.18	2.3	18.9
Pears ..	0.518	0.65	1.3	10.4
Peaches { Fruit.....	2.90	3.65	7.3	58.4
{ Juice.....	2.688	2.85	5.7	45.6
Blackberries.....	4.20	5.28	10.6	84.
Cherries.....	2.89	3.65	7.3	58.4
Pumpkin ..	1.299	1.62	3.2	25.9
Sweet Potatoes.....	0.92	1.16	2.3	18.5
Peas (Native).....	0.30	0.38	0.8	6.2
String Beans.....	1.08	1.36	2.7	21.7
Salmon.....	0.30	0.38	0.8	6.2
Condensed Milk.....	None.			
Pineapples ..	0.686	0.864	1.7	13.6
Pineapples ..	1.11	1.4	2.8	22.4

Mr. H. A. Weber read a paper before the recent meeting of the American Chemical Society, at Washington, on the same subject (Jour. American Chemical Society, Sept., 1891). He weighed the tin as oxide, and calculated the corresponding weight of chloride. His results are best exhibited in tabular form, as above:

[The doses above mentioned are for stannous chloride, which are given as from 10 to 30 milligrammes ( $\frac{1}{6}$  to  $\frac{1}{2}$  grain) three to

four times a day (Hager). The largest single dose, according to Hager, is  $\frac{5}{6}$  grains, and the maximum daily quantity is 0.5 grammes, or  $7\frac{1}{2}$  grains. According to these figures, the numbers of the doses here given are too large. It cannot be claimed that the organic salts of tin, or even the sulphide, as is probably the condition in canned foods, are as active poisons as the chloride. While, therefore, the above statement of doses, contained in these foods is misleading, there can be no doubt that the quantity is often larger than is desirable. Some remedy for this condition of affairs is certainly needed.—E. H. B.]

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## OPHTHALMOLOGY.

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BY RICHMOND LENNOX, M.D.,

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### THE ORIGIN OF INFLAMMATION AND THE ACTION OF AGENTS EXCITING IT.

(Continued.)

Inoculation with leptothrix bucalis taken from the mouth (pure cultures have not as yet been obtained) was followed by development of the bacteria with accompanying conjunctivitis and hypopyon, and emigration of leucocytes in the peripheral corneal zones.

Earlier experiments had convinced Leber that the appearances accompanying mycotic inflammation could only be explained by the assumption that they were due to the poisonous action of some substance produced by the microbes themselves, and his next endeavors were to isolate this substance. This he succeeded in doing for staphylococcus pyogenes aureus, and gave to it the name phlogosin. The method of its production it is unnecessary to detail here.

The injection of neutral aqueous extract of aspergillus fum. into the cornea was followed by a more or less extended necrosis of the cellular elements of the corneal tissue with moderate infiltration with leucocytes, especially at the margin of the necrotic tissue and at the corneal periphery, the anterior chamber containing pus and fibrin.

Leber's experiments with germs from extracts of putrefying matter showed that during putrefaction substances soluble in water develop, which cause when introduced into the living organism a

local purulent inflammation and necrosis of similar character to that of mycotic origin, but less intense, and especially characterized by the appearance of a ring of infiltration around the point of injection due to the immigration of leucocytes from the corneal periphery.

Sterilized extracts of staphylococcus aureus caused an inflammation proportionate to the amount introduced, and the possibility of its direct action upon vascular tissues. The resulting inflammation was similar to that caused by the germs themselves, but differed in its tendency to limitation and its possibilities of recovery; that due to living staphylococcus usually extending and causing the total destruction of the eye. There was a noticeable diminution of corneal sensibility during the height of the inflammation, and a marked tendency to rapidly-occurring spontaneous perforation at the corneal limbus, explained by Leber by the assumption that the toxic substances produced by the cocci first cause a necrosis, the necrotic tissue then yielding to the solvent action of a ferment probably produced by the leucocytes. Its occurrence at the sclero-corneal junction is due to the filtration at the angle of the chamber and the consequent continuous irrigation of the parts involved with the active ferment.

In the fourth part of the work Leber considers the action of various chemical substances in exciting inflammation, and gives an interesting summary and analysis of his own and others experiments. The question whether purely chemical substances can excite purulent inflammation must be answered in the affirmative, and the further question then presents itself to what properties of the substance this action is due. We find here the same "remote" action as was associated with the bacteriological products capable of exciting inflammation. The action of chemical substances of other origin is not limited to the immediate vicinity, but could be demonstrated in a greater or less degree for all the substances tested. Mechanical influences which can only be ascribed to solid bodies play a very trivial part in the origin of inflammation. The remote action of chemical substances is evidenced by the identity of the inflammation excited with the mycotic keratitis for which the proof of this remote action has already been given, and further by the fact that purulent inflammation may be caused by very different irritants, even when the latter are enclosed in glass tubes and thus kept from direct contact with the tissues. One may therefore assume for the chemical excitants of inflammation also a capability of extension to the neighboring parts, which, however, takes place in different ways according to the substance used. For

substances easily soluble in water their diffusibility offers a ready explanation, only among such there are apparently not many which have a strongly inflammatory action. This is probably due to the ready absorption of easily soluble substances and their consequent rapid removal, so that while they often produce a more or less severe local cauterization, they may not excite any inflammation, as for that a certain duration of action is necessary. When such substances act on an uninjured mucous surface with consequent slower absorption, active inflammation may ensue although absolutely wanting after subcutaneous use of the same agent. Under certain circumstances sublimate acts in this way, and still more markedly jequerty, of which the strongly irritant action upon the uninjured conjunctiva stands in marked contrast to the complete absence of inflammation after its introduction into the anterior chamber where the rapid absorption of the poison speedily causes the death of the animal.

*(To be continued.)*

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## NEW BOOKS AND BOOK NOTICES.

*All books received by the JOURNAL are deposited permanently in the Library of the  
Medical Society of the County of Kings.*

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A SHORT MANUAL OF ANALYTICAL CHEMISTRY. By John Muter, M.A., Ph.D., F.R.S.E., F.I.C., F.C.S., etc. The First American from the Fourth English Edition. Edited by C. C. Hamilton, M.D., Ph.G., Prof. of Analytical Chemistry in the University Medical College and Kansas City College of Pharmacy. Pp. 205. Philadelphia, 1891: P. Blakiston, Son & Co.

This work, intended as a laboratory guide for students of pharmacy and medicine, has the merit of having reached the fourth edition in a very few years, and Dr. Hamilton has done good service in adapting it to the United States Pharmacopœia. The aim of the author has been to condense into this small book the essentials of analytical chemistry, qualitative and quantitative, inorganic and organic. It is necessarily brief in the description of many processes, rather more so than could be desired for beginners, or for those who attempt to work with it without a teacher.

The methods employed are usually the best known; the language is accurate, clear, and the information is reliable. After giving a sufficiently complete course in the qualitative examination of organic as well as inorganic substances, there follows a course in easy quantitative methods, and methods for the sanitary examination of water, air and foods, and a systematic scheme for the chemical examination of the urine.

As a whole, the book is well adapted as a laboratory guide for students of pharmacy, medicine and sanitary chemistry.

ESSENTIALS OF ANATOMY AND MANUAL OF PRACTICAL DISSECTION. By Charles B. Naucrede, M.D. Fourth Edition. Philadelphia 1891: N. B. Saunders. Price, \$2.00, cloth or oilcloth. \$2.50 sheep.

This edition of this well-known manual has been made still more valuable by the addition of an appendix containing Hints on Dissection by J. Chalmers Da Costa, M.D. It is illustrated by thirty full-page lithographic plates in colors, and 188 woodcuts. That it has reached its fourteenth thousand is sufficient proof of its popularity.

STORIES OF A COUNTRY DOCTOR. By Willis P. King, M.D. Philadelphia, 1891: Hummel & Parmelee. Price, \$1.00.

A very readable book, containing much that is amusing and novel. From it one may learn a good deal of early pioneer life in the West, and of the ups and downs in early country practice. A good book to have by one's side when practice is dull and office calls few.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. Edited by Charles E. Sajous, M.D., and Seventy Associate Editors: F. A. Davis, 1891.

This Annual, now in its fourth year, is too well known to the profession to need to be called to their attention. The series of 1891 falls in nowise behind its predecessors. We cannot but notice one very serious defect, and that is the absence of the name of one physician of Brooklyn, as Assistant Editor. If the editor-in-chief expects to have the Annual achieve the success which it should, this oversight should be corrected. We have not overlooked the fact that the name of Dr. A. L. Gihon appears in the list, but we can hardly claim him for Brooklyn (we wish we could), as he is in the service of the United States, and not a permanent resident.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS. By H. A. Hare, M.D. B.Sc. Second Edition. Philadelphia, 1891: Lea Brothers.

The author has divided his work of 658 pages into four sections, under the headings: General Considerations, Drugs, Foods, etc., Diseases. The *materia medica* part proper is in small amount, and the paragraphs in section two on therapeutics deal with morbid conditions in the abstract, leaving the particular application of remedies to disease to the last section, commencing with page 351.

The plan of Farquharson in giving the subjects discussed in alphabetical order has been followed. The section on drugs commences with acacia and ends with zinc; that on diseases commences with abortion and ends with worms.

Under each drug a paragraph is given dealing with "administration," which is of great practical value, giving the best methods of giving the drug under discussion.

Young's rule for the dose in children is considered the best: Add 12 to the age and divide by the age. If the age be two, the dose will be one-seventh that given to an adult. Arrived at in this manner:  $2 + 12 = 14$ ;  $14/2 = 7$ .

On pages 30 and 31 will be found a list—twenty in number—of incompatibles. A few of these, using the original numbers, are here given. 3. Alkalies should not be given with alkaloids. 5. Chlorate of potash and ammonium chloride when mixed together may take fire. 8. Gum arabic is not to be added to solutions of iron, lead, or mineral acids. 15. Corrosive sublimate, the salts of lead, iodide of potash, and nitrate of silver should always be prescribed alone, except: Corrosive sublimate may be given with iodide of potash, a double precipitate resulting, which re-dissolves and forms a double salt. Nitrate of silver may be given with opium and hyoscyamus. 16. Syrup of squills should not be given with ammonium carbonate. Chloride of ammonium may be used. 17. Cherry-laurel water should not be given with morphia, as cyanide of morphia may be formed. 20. Calomel and antipyrin should not be used together.

The author believes that antipyrin and antifebrin lessen the temperature by decreasing heat production and increasing heat dissipation. Sweating does not cause the lowering, as the decrease occurs when atropine has been given, checking perspiration. Phenacetin is not regarded as certain an antipyretic as antipyrin, but is considered its equal in reducing pain.

Camphoric acid is recommended in the night-sweats of phthisis in doses of 20-30 grains, given in capsule.

There is an interesting and important article on carbolic acid. It is put down as one of the most rapidly-acting poisons. Death from a lethal dose may occur in a few minutes or at the end of several hours. Failure of respiration is the immediate cause of sudden death. Inflammation of the stomach and intestines are present in cases of longer duration. The drug produces a characteristic effect locally on mucous membranes. The eschar has a white centre, its edges being red. This condition is found in œsophagus, stomach, and intestines. Surgical dressings, containing carbolic acid, sometimes produce poison. The early symptoms are dark smoky urine, nervousness, pain in lumbar region. The direct antidote is some soluble sulphate. Epsom or Glauber salts may be used. An insoluble sulpho-carbolate is formed.

Considerable space is given to ether and chloroform. The former is considered safer, but its use is contra-indicated in bronchitis, acute nephritis, peritonitis or gastritis, aneurism, and marked vascular atheroma. Chloroform may be used as the anæsthetic in such cases. The choice should also be guided by the quantity necessary during any operation and by the probable effects on the circulation. There may be too great stimulation (as ether in vascular change) or too great depression.

Hoffman's anodyne is mentioned as a valuable remedy in angina pectoris.

From the article on alcohol the two following tables are given. The first is very imperfect, many important points being omitted. The second is more complete.

Tables of differential diagnosis between comatose conditions are of value. If they contain nothing new, the repetition of old points cannot be too frequent.



*Alcoholism.*

1. Pupils normal or dilated.
2. Respiration nearly normal; pulse rapid and finally feeble.
3. Face may be pallid.
4. Skin cool, perhaps moist.

*Opium Poisoning.*

1. Pupils contracted.
2. Respiration and pulse slow and full.
3. Face suffused and cyanosed.
4. Skin warmer than in alcohol poisoning.

The second table is:

*Alcoholism.*

1. Pulse rapid, compressible, weak.
2. Skin moist, or relaxed and cool.
3. Bodily temperature lower.
4. Pupils equally contracted or dilated; generally dilated.
5. No hemiplegia.
6. Breathing not so stertorous, nor so one-sided in lips.
7. No facial paralysis.
8. Unconsciousness may not be complete.

*Apoplexy.*

1. Pulse strong and slow.
2. Skin hot or dry.
3. Bodily temperature raised.
4. Pupils unequal.
5. Hemiplegia; one side tossed, the other remaining motionless.
6. Respiration stertorous; the lips being inflated on one side on expiration.
7. Facial paralysis.
8. Unconsciousness complete.

The chapter on antiseptics contains a description of Sir Joseph Lister's latest surgical dressing. This abbreviated is as follows: Cyanide of potash, cyanide of mercury, and sulphate of zinc are mixed together in solution; the first two are dissolved together in  $1\frac{1}{2}$  ounces of water for every 100 grains of potassium cyanide; the sulphate of zinc is dissolved in  $4\frac{1}{2}$  ounces of water. The two solutions are mixed. The precipitate is collected and washed twice with water (6 ounces). The precipitate is mixed in mortar with a solution of hæmatoxylin (1 part for 100 parts of the cyanide potash). A weak solution of ammonia (1 atom to each atom of hæmatoxylin) is added. The mixture stands, with stirring, for several hours, is filtered, and the salt drained and dried. This is levigated. When used it is mixed in a bichloride solution (1-4000) and the gauze saturated. The gauze should be used moist. The dressing is not irritating and the salt is not dissolved by the secretion of the wound.

A method of preparing the hands for operation is also given. Although this is not universally practiced it is worthy of quotation. "The hands and forearms are thoroughly brushed in hot soapsuds for several minutes, after which the nails are carefully cleaned by a knife and brush, and the washing again repeated; the hands are then washed in alcohol for one minute, special attention being paid to the nails; finally they are soaked for three minutes in a solution of bichloride (1-1000) and during the course of the operation are occasionally washed in a solution of the same strength."

Corrosive sublimate is regarded as the best disinfectant (1-200; 1-500). For ordinary use chlorinated lime is of great value. Sulphate of iron is regarded as an antiseptic and not as a disinfectant.

On page 339 is a short article on kataphoresis—the introduction into the body of drugs by use of electricity. The medicines used are carried by osmosis through the tissues between the two poles. The sponge electrodes are to be saturated with the medicated solution. The continuous current is used. The positive pole is placed over the painful part and the negative at a point removed. The current may be occasionally reversed.

The author has seen good results from the suspension treatment in *tabes dorsalis*.

The author is conservative in the use of salines in peritonitis, believing that in surgical cases (coming after operation) they may be used, but in medical cases, where the cause of the inflammation is obscure, opium is the best remedy.

HENRY CONKLING, M.D.

**MEDICAL DIAGNOSIS.** By Oswald Vierordt, M.D. (Heidelberg): Being the authorized translation by Francis H. Stuart, A.M. M.D., of Brooklyn, Member of the Kings County Medical Society, New York Academy of Medicine, British Medical Association, etc. Philadelphia, 1891: W. B. Saunders.

The translator is to be congratulated upon the successful completion of his task, which no doubt a pleasant one, must have been one of great magnitude, as is indicated by the size of the work; and also for his added notes, especially those on "case taking."

The work comprises all subjects of medicine, and considers the various means of making diagnoses, commencing with the "general examination," and ending with a *résumé* of the diagnostic points in nervous diseases. A short appendix is added.

There is one important criticism to make, and this is upon the method the author has pursued in the description of various diseases. It is quite impossible to take one special disease and find on successive pages all points of diagnosis connected with it. For the temperature, condition of the circulation, the patient's mental state, the urine, etc., one must look under the respective chapters for each. This can be illustrated by the disease *pneumonia*. The diagnostic points of this disease are found on 52 different pages; the first being on page 21, and the last on page 600. Between these two one must search for a detailed account of the symptoms and signs of the disease. Moreover, the matter is frequently so written that it applies to pneumonia only as one of several conditions being illustrated. In this way a large mass of material, unconnected with the disease, must be read. This at once destroys the value of the book as one for ready reference.

In connection with pneumonia (under the urinary chapter) the old statement is found that the chlorides are diminished or absent during the disease. A personal examination of many specimens of urine, in a large number of cases of pneumonia, has yet to result in finding marked diminution, and never absence. The value of this sign in prognosis is extremely doubtful.

Some valuable points in connection with the skin are found in the first part of the work. Six abnormal conditions of color are noted. These are the pale, red, cyanotic, yellow, bronze, and gray skin. An interesting case is mentioned where the skin became pale in endocarditis. Upon post-mortem examination a rupture of one of the aortic cusps was found. The skin of cyanosis may be due to narrowing of the upper air passages, smaller bronchi, pulmonary diseases, paralysis of respiratory muscles, and forms of cardiac disease. The bronze color is found on the hands and face. The gray skin comes from nitrate of silver. The color is not removed by pressure.

With chapter four commences a description of the examination of the *respiratory apparatus*. An account is given of Cheyne-Stokes respiration; and

the statement is made that this is present in cases of opium poisoning. This has not been noted by other authorities. If it be so, it can come only just before dissolution. Its presence is very doubtful.

Eight pages are given up to a discussion of *dyspnœa*, and the multiplicity of the terms has produced numerous contradictions. *Dyspnœa*, as the author observes, is difficult breathing, but, it should be added, breathing the difficulty of which the patient is cognizant. The author speaks of there being *dyspnœa* in the Cheyne-Stokes respiration. This is a distinct contradiction, for in speaking of that breathing, he describes one period in which the respirations are normal. A further criticism can be raised. Patients with Cheyne-Stokes respiration are comatose and in that condition *difficulty* of any act is an impossibility, for all acts are unconsciously performed.

Tenderness is said to be sometimes present in abnormal conditions of the chest. The author describes the difference between tenderness in diseases of the respiratory apparatus and of the soft parts and ribs.

A vivid diagnostic illustration is given relating to the *qualities of sounds* over the lungs, as produced by percussion. The intensity of the sound depends upon the length of the oscillation, the thickness of the intervening tissue, and the amount of air in part percussed. The drawing serves well in emphasizing these points, as dulness is sometimes said to be present when the quality is merely a changed condition, due to the region percussed.

The author mentions the *sense of resistance* to the finger upon percussion. This is most important and gives evidence quite as valuable as the sound. The author has found it in cases of pleuritic exudation, thickened pleura, tumors of the chest, infiltration of the lung.

The *tympanitic sound* over the chest may have a relation to the elastic equilibrium of the tissues, or to vomicæ. Depending upon the communication of the vomicæ with the air, there may be opened or closed tympanitic resonance. A large cavity with smooth walls gives a metallic sound. There is a beautiful diagram of "Gerhardt's change of sound." This depends upon the movement of fluid in a cavity, as the patient is in the upright or dorsal position. A marked dulness comes when the fluid falls to the bottom of the cavity, as in the upright position.

On page 148 is a description of what is evidently bronchial-vesicular breathing. The term used is "undefined breathing."

It is with a feeling of surprise that we read the author's account of the *crepitant râle*. He advances a new theory that it may originate in the smaller bronchi, and mentions other places of origin. No word is given, however, in the last and certainly one of the most scientific theories. A theory which, in the dead-house as we look at a pneumonic lung, seems perfect. This is Dr. Leaming's theory of "plastic pleuritis" This is not now a distinctively "American idea," as Sir Andrew Clark has written upon the subject. The occurrence of the râle in the bronchi is very questionable.

*Ægophony* is said to be heard at the upper boundary of dulness.

The *plegaphonia* of Sherwald is described on page 159. Percussion of the trachea and auscultation at the same time at some point on the chest give a variety of sounds. Vibrations are produced similar to those of the cords when speaking. The sounds heard are weak over sound lung; *loud over infiltrations*; weak over an exudation; loud over a large open cavity. The second of these is the most important.

The position and character of the apex beat of the heart receives exhaustive consideration. The position may be altered by changes of posture, excited action, diseases of the heart, deformities of the thorax, congestions of the lungs, shrinking of the lung, and pleuritic exudation. The author mentions the old theory that in the last disease the head is *pushed* over to the sound side. Dr. Douglas Pourel's statement that it is *pulled* over by the lung on the healthy side is not noted. It is by far the more scientific of the two theories.

The author gives the rule that breadth of the apex beat generally means a strong beat. Continued breadth and strength point to hypertrophy of the left ventricle.

The sounds of the heart are considered as due to closure of the mitral and tricuspid valves, aortic and pulmonary valves, contraction of the ventricle, and sudden filling of the conus arteriosus. The first sound is a combination resulting from the action of muscle, valve, and vessel.

The most important point under the heart is the mention of Skoda's statement that accentuation of the pulmonary second sound means hypertrophy of the right ventricle.

*Murmurs that can be felt* are described. The short and useful term (for these murmurs) of *thrill* is not given.

A valuable description of the *slow* pulse is given. Some of its causes are forms of nephritis, hæmorrhages, diseases of heart muscle, old age, aortic stenosis, brain disease, forms of icterus, some cases of rheumatic fever.

*Hardness of the pulse is* found in chronic interstitial nephritis.

There are important articles on the examination of the liver and spleen. Palpation of the liver considers the existence of tenderness (most marked in parietal abscess or in peritonitis); the size and form (displacements, as from pleuritic exudation); the surface (smooth, as in amyloid liver; rough, as in granulated liver). If the gall bladder be normal it cannot be felt except in very thin patients. The liver in front rises to the ensiform cartilage; at the sides to the eighth rib; in the back to the tenth rib. The cardiac dulness runs into the hepatic dulness.

The spleen can be felt when the abdominal walls are very lax; in cases of chest deformity; in enlargements; or when displaced. Under ordinary conditions the upper third is covered by lung, the remaining portion being in contact with the wall (the word *thoracic* before wall is evidently a mistake in copy).

We regret to find so much stress laid on specific gravity as an aid in the diagnosis of diabetes mellitus. So many times a large amount of sugar is found by quantitative examination in urines of low gravity, that no reliance can be placed in any specimen upon the weight. Low specific gravity does not mean *no sugar*; and high specific gravity does not mean *presence of sugar*.

Some excellent phrases are used. Among these are: "Stroking palpation;" "wandering liver" (much better than "movable"); "tone of the cough."

The type is excellent and the illustrations of admirable force.

HENRY CONKLING, M.D.

#### REPORT OF THE BROOKLYN HOSPITAL: Including the Orthopædic Dispensary for the year 1890.

In addition to the summary of the work of the Hospital proper, the report of the work of the Orthopædic Dispensary (offered to the public in 1869) for 1890 is interesting as a special exhibit:

"The number of new patients under treatment during the year was 467; the total number of visits from old and new patients was 1,353. There were 19 cases of hip-joint disease, 18 cases of spinal disease and curvature of the spine, 9 cases of knock-knees, 18 cases of bow-legs, 15 cases of club-feet, 18 cases of diseases of the joints, 10 cases of fractures, 14 cases of diseases of bones, 52 cases of hernia, which were supplied with trusses, 12 cases of paralysis, and 282 cases of general surgery.

"Electricity was applied in 428 cases, and 79 plaster-of-Paris jackets and splints were applied."

SYLLABUS OF THE OBSTETRICAL LECTURES IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA. By Richard C. Norris, A. M., M. D. Second Edition. Philadelphia, 1891: W. B. Saunders.

This book is based on the lectures of Prof. Hirst, of the University of Pennsylvania, and is designed, as the author states in the preface, to help the student over the difficulties of accurate note taking, without relieving him of the necessity of constant attendance on the lectures. It places in his hands a complete outline for the course in obstetrics and at the same time affords a means of classifying the additional knowledge which he gains from the *viva voce* teaching. This we believe is the true plan of acquiring a knowledge of any subject. The student who undertakes in the first course to grasp all details is lost in the confusion of a great mass of detached facts; while he who first fixes well in mind the skeleton of his topic, will subsequently find it easy work to build upon this framework a well-organized knowledge of his subject. We believe in just such aids for the student as this syllabus of Dr. Norris, despite the adverse opinions of certain critics who look upon them as aids to cramming. Their proper use is of the greatest possible advantage to every medical student and is indispensable to many who have not the necessary mental training to arrange and classify for themselves.

Important improvements and additions have been made in the second edition of the Syllabus, and the book has been interleaved for convenience in note taking.

CHAS. JEWETT.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK FOR THE YEAR 1891. Published by the Society.

TRANSACTIONS OF THE 34TH ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI, 1891.

Though the secular press is prompt in reporting the work of learned societies and medical journals give speedy circulation to the more marked communications of medical associations, the societies themselves still feel justified in the expense of publishing their own transactions complete. The circulation is limited mainly to their own members and whether able to attend the Session of the Society the members feel a certain *corps d'esprit* in possessing the combined work of the organization of which they are constituents. Contributors to the work of these Annual Sessions usually bring their most finished efforts and the dominant questions of the day ordinarily find the full-

est discussions by experts. The handsome volume issued by the Society of the State of New York is notable for the large space given to papers and discussions on tuberculosis, including the Koch treatment, appendicitis, laparotomy and pelvic inflammation. The information here brought out represents the advanced knowledge in these several matters and is indispensable to the practitioner. Abdominal surgery is prominent in the report of the Missouri Association.

**THE LANGUAGE OF MEDICINE.** A Manual giving the Origin, Etymology, Pronunciation and Meaning of the Technical Terms Found in Medical Literature. By F. R. Campbell, A. M., M. D. Pp. 318. New York, 1888: D. Appleton & Company.

This volume belongs to the advance guard of the higher and exact medical learning. It is a laurel on the brow of the author and a credit to the profession of which he is a member. The last decade has brought into bold relief the larger learning, the broader gifts and more general culture of medical men. When medicine burst through the limits of its art of healing into the domain of prophylaxis and then on to the high-lands of preventive medicine, it found itself in company with the rapid and brilliant developments of all branches of learning that have distinguished the present half of the century. Medical men found here their inspiration in the plea for higher qualifications for the student as the sure basis for better medical skill and for assuring fitness for free association on equal terms with the larger culture of experts in other branches of learning. In addition to the competent exercise of purely professional duties this era of more liberal knowledge has brought out into prominence many medical men who are figuring not only as patrons of art, science and literature, but as exponents in their own persons, of skilled work here as a novelist, a poet, an artist on canvas or in marble. Dr. Campbell's philological excursion is a unique exponent of this liberal advance. One might well envy the leisure or industry, one or both, that made it possible to charm his hours with the delightful study of the sources of the language which is the common speech of his brethren. His volume is by inference a plea for exact speech, but it is more in being an exposition of the classical sources of the useful tools of medical art. It is so unique, so unlike any other contribution to medical learning, so scholarly, yet so unpedantic as to be a treasure of pure learning to any to whom scholarship, for its own sake, is a prize worth seeking.

**MEDICAL SYMBOLISM IN CONNECTION WITH HISTORICAL STUDIES IN THE ARTS OF HEALING AND HYGIENE.** Illustrated. By Thomas S. Sozinskey, M. D., Ph. D. Price, \$1.00. Philadelphia and London: F. A. Davis, publisher, 1891.

Dr. Sozinskey died too young. The city of Brotherly Love could ill spare him. The profession he adorned is increasingly better for such men. Thirty-seven years of life, so full of promise, is too little to make a profound impression on affairs, on men, or the currents of thought. Scholarship, for its own sake, falls within the possibilities of few men, for when the hard necessities of life are urgent, in the hurried rush and competition of life, there is little

chance for literary work, apart from those lines that lead up to expertness in the details of a special calling. When it is the outcome of an earnest life, the result finds its causes in some special opinions, in the tendency given by early culture, and in an industry inspired by enthusiasm. These, unfortunately, are all rare conditions. The unpretentious volume, with its modest title, which Dr. Sozinsky lived to complete, shows that the author held these unusual gifts within himself. The mission of his short life was not to enlarge the bounds of science, to enrich art by new combinations, to make that life distinguished by eminent expertness, but rather to suggest that the earlier race was not to be despised and to show to those, who are willing to see, that each epoch is recurringly dependent on the epochs that precede. The paths that the author has trod are neither familiar nor hackneyed. His special learning is recondit rather than pedantic. He has traced out the early facts and myths of history and legend that first saw the light in the literature and faith in the only records that tell of how medicine was held in Persian and Roman folk-lore and among the civilizations whom Assyrian, Persian, Egyptian, Hebrew and Aryan literature, cuneiform and script, told how these national beliefs, in inheritance and transfer, through migration and subjection, sprung into existence and fastened themselves into the consciousness and daily life of these peoples.

Certainly it were worth while for the modern medical man, from out his discouragements and his triumphs, to ponder on the life of his brethren in the days that are remotely dim, when the blind bard could voice the thought of the people of his day, in a passage suggested by Machaon's splendid exercise of his beneficent art, spoken by Idomeneus when the offspring of the healing god was wounded by a dart fired by "the spouse of Helen, and trembling — for his physician fear'd."

"One so skilled in medicine and to free  
The inherent barb is worth a multitude." (p. 5.)

No less is it consoling to read the tribute of Ecclesiasticus, Hebraic-Egyptian in origin and two hundred years earlier: "The skill of the physician shall lift up his head and in the sight of good men he shall be praised."

Laparotomy, in an atmosphere, purged through the deliverances of the bacteriologist and with tools aseptic by the phenols and the bichloride, has crowded medical literature within the past decade. But when we read in mythic lore of the criminal *liaison* between Apollo and Coronis, a young virgin of Thessaly, her faithlessness to her divine paramour, her intimacy with the Arcadian Ischys, her infidelity made known to Apollo; slain, when her delivery was not far off, by a thunderbolt directed by Artemis, the Goddess of Chastity, when her body was being consumed on the merciless pyre; Apollo's paternal feelings become stirred, and saying:

"I may not bear to slay my child  
With his sad mother, sin-defiled,"

proceeded forthwith to save Æsculapius, his unborn offspring, who, in this vanity-stung era shall say when arose laparotomy and the Cæsarean section? (Pp. 33-37.)

The relation of specialists to general medicine has been freely discussed as if it were a novelty. Let those who practice a special culture, believing themselves "in the foremost ranks of time," read what Herodotus wrote of specialists in Egypt: "Medicine is practiced among them on a plan of separation; each physician treats a single disorder and no more. Thus the country swarms with medical practitioners, some undertaking to cure diseases of the eye; others, of the head; others, again, of the teeth; others, of the intestines; and some, those which are not good."

But to tell the story of this charming volume would be to quote the entire book. There is not a line of dry reading between its covers. It is a contribution to medical literature altogether unique. Mr. Matthews, in the October century tells, in "A Story of a Story," how the good work of a good man may bless his memory. The attractive learning revealed under the title of "Medical Symbolism" may keep fragrant the memory of the author who died too young.

GOLDEN JUBILEE CELEBRATION OF THE RT. REV. JOHN LOUGHLIN, D.D.

By Rev. James H. Mitchell, A.M., Brooklyn. The Golden Jubilee Committee.

This volume of 238 pages is a complete account of the Golden Jubilee of Rt. Rev. John Loughlin, which was held October 18, 1890, to commemorate the completion of fifty years of service in the Catholic Church. It contains in full the addresses of the different societies, of the clergy and of the laity, which were made upon that occasion. The wonderful characteristic of this country, its marvelous growth, is nowhere more strikingly shown than in some of the statistics which appear in the text. In 1853 Rt. Rev. John Loughlin was installed in old St. James' Cathedral on Jay Street, as the first Bishop of Brooklyn. At that time the population of Brooklyn was 100,000; it is now 860,000; there were then 12 Catholic churches on Long Island; there are now 152; then the Bishop had 15,000 subjects; now he has 300,000; now there are 93 Catholic schools, 2 colleges and 19 academies; then there was not one of either class.

The author discusses incidentally the question as to who is entitled to the credit of discovering the Hudson River. The claim of Henry Hudson (1609) is disputed. Gomez and Gordillo (1527) entered New York Bay and named and described Sandy Hook (Cabo de Arenas); they sailed up the Hudson River (Rio de las Montanas) as far as the Highlands; they also described Long Island, which they called "Isle de los Apostolos." It is claimed that all these landmarks can be seen on the Spanish maps of Ribero, which were made in 1529.





## BROOKLYN VITAL STATISTICS FOR SEPTEMBER, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population estimated, Oct. 1, 1891,	869,048	The number of births reported was	1609
In the month of Sept. there were 1608 deaths, the rate of mortality being 22.51 per 1000 of population.		The number of marriages reported was	563
		The number of still-births reported was	116

The mortality by classes and by certain of the more important diseases was as follows :

*Causes :*

1. Zymotic, - - - -	422	Malarial Diseases, - - - -	16
2. Constitutional, - - - -	372	Diarrhoeal Diseases (all ages),	239
3. Local, - - - -	661	"    "    (under 5 years),	223
4. Developmental, - - - -	108	Phthisis, - - - -	153
5. Violence, - - - -	45	Bronchitis, - - - -	50
Measles, - - - -	4	Pneumonia, - - - -	72
Croup, - - - -	20	All Respiratory, - - - -	143
Diphtheria, - - - -	46	Bright's Diseases, - - - -	55
Scarlet Fever, - - - -	23	Puerperal Diseases, - - - -	10
Typhoid Fever, - - - -	34	Old Age, - - - -	18
Whooping-Cough, - - - -	6	Suicide, - - - -	5
Cerebro Spinal Meningitis.....	9		

*Reported Cases :*

Diphtheria, - - - -	101	Measles, - - - -	12
Scarlet Fever, - - - -	128	Typhoid Fever, - - - -	112

Deaths by sex, color and social condition were as follows :

Male, - - - -	861	Native, - - - -	1176
Female, - - - -	747	Foreign, - - - -	431
White, - - - -	1786	Married, - - - -	367
Colored, - - - -	28	Single, - - - -	1084
Widows, Widowers, and not stated, - - - -			157

Still-births, excluded from list of deaths, were as follows :

Males, - - - -	61	} Total, - - - -	116
Females, - - - -	55		
Deaths in public institutions, -	123	Homicides, - - - -	
Deaths in tenement houses, -	540	Suicides, - - - -	5
Inquest cases, - - - -			139

*Age Periods :*

Deaths under 1 year, - - - -	626	Total deaths, 5 to 20, - - - -	109
"    "    5 years, - - - -	217	"    "    20 to 40, - - - -	241
Total deaths under 5, - - - -	843	"    "    40 to 60, - - - -	209
		"    "    60 and upwards, - - - -	206

Certain foreign and American cities show the following death-rate for the month of June :

Brooklyn, - - - -	22.51	Vienna, - - - -	21.85
New York, - - - -	23.31	Paris, - - - -	19.21
Philadelphia, - - - -	18.76	London, - - - -	17.60
Berlin, - - - -	22.05	Glasgow, - - - -	19.08
Dublin, - - - -			21.45











